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THE MUNICIPAL INDEX AND ATLAS used in connection with the current advertisements in THE AMERICAN CITY, places local officials in the most favorable position to obtain all types of available equipment and supplies from manufacturers who desire to serve municipal government departments. THE MUNICIPAL INDEX AND ATLAS (723 pages) is published annually by THE AMERICAN CITY MAGAZINE CORPORATION, 470 Fourth Avenue, New York 16, N. Y.

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Medals AND Milestones

More than 50 awards from learned and professional societies have been presented to staff members of Bell Telephone Laboratories for their scientific discoveries and inventions.

Awards include the Nobel Prize in Physics, the Hughes Medal of the Royal Society, London, the Willard Gibbs Medal, the Franklin Gold Medal, and the John Scott Medal.

Bell Laboratories scientists and their associates explore every scientific field which offers hope of bettering communications. That is why Bell System research is so important to the future of sound and television broadcasting, as well as to the ever-improving standards of telephone service.

BELL TELEPHONE SYSTEM

To Prevent the Utter Destruction of Urban Civilization

Los Alamos Scientists Appeal to Mayors

A SAMPLE of New Mexico sand fused by the first atomic bomb and a print of this photograph of Nagasaki were presented last month to the mayors of the 42 largest cities in the United States by the Association of Los Alamos Scientists.* In an accompanying letter, Willard Stout, as President of the Association, urged the mayors to testify at the very important hearings of the McMahon committee now being held in Washington, and added:

"We know that no adequate defense against atomic explosives is now known or likely to be developed in the near future; and we believe, with most other experts in this field, that only international control of these weapons can prevent the utter destruction of urban civilization within our lifetime."

LOS ALAMOS PROJECT, OPTICS GROUP (7-11), OFFICIAL PHOTO

What the atomic bomb did to Nagasaki

President Truman Backs Atomic Energy Control

PROMPT enactment of legislation for the domestic development and control of atomic energy is urged by President Truman in a letter to Senator Brien McMahon of Connecticut, chairman of the above-mentioned committee. Under the McMahon bill (S. 1717) control of the new source of energy would be placed in the hands of a civilian-controlled Government monopoly.

Emphasizing the need also for facilitating international control, the President pointed out that effective provisions for domestic control of atomic energy "will contribute to the achievement of a safe, effective international arrangement making possible the ultimate use of atomic energy for exclusively peaceful and humanitarian ends. The commission should be in a position to carry out at once any international agreements relating to inspection of fissionable materials, dissemination of information, and similar areas of international action. I feel that it is a matter of urgency that sound domestic legislation on atomic energy be enacted with utmost speed. Domestic and international issues of the first importance wait upon this action."

Senator McMahon informs THE AMERICAN CITY that hearings on domestic legislation will continue until about February 20 and that hearings on the international aspects of atomic energy will start shortly thereafter. At these hearings and when the measure comes to a vote in Congress, the support of mayors and other municipal officials may aid greatly in securing prompt and effective legislation.

* May be addressed at Post Office Box 1663, Santa Fe, N. M.

Federal Works Agency Funds Advanced for Public Works Plans and Specifications

ADVANCES in Federal Works Agency funds aggregating $13,248,246 for the preparation of plans and specifications for 1,826 proposed public works to cost an estimated $564,932,291 had been aproved up to December 31. The figures are in a report from Commissioner George H. Field, of the Bureau of Community Facilities, to Major General Philip B. Fleming, Federal Works Administrator. A total of 4,175 applications, for an estimated expenditure of $1,686,097,204, have been received by Mr. Field's office.

Types of proposed public works for which advances were made are:

Highways, roads, and streets (not included in the Federal-Aid Highway System) 100, to cost an estimated $15,651,960.

Bridges, viaducts and grade separations, 27, to cost an estimated $19,358,982.

Airports, 11, to cost $4,125,248.

Sewer, water, and sanitation facilities, 809, to cost $235,416,906.

Schools and other educational facilities, 483, to cost $116,862,079.

Hospital and health facilities, 75, to cost $33,252,246; other public buildings, 195, to cost $56,819,713.

Parks and other recreational facilities, 93, to cost $7,995,061, and miscellaneous public facilities, 33, to cost $75,450,096.

Authorization of appropriation of federal funds to be allotted by the Federal Works Administrator as advances to state and local governments to aid in the plan preparation of public works (not including housing) was made in Title V of the War Mobilization and Reconversion Act of 1944. The funds are made available through the Bureau of Community Facilities, and are to be repaid, without interest, when construction is begun.

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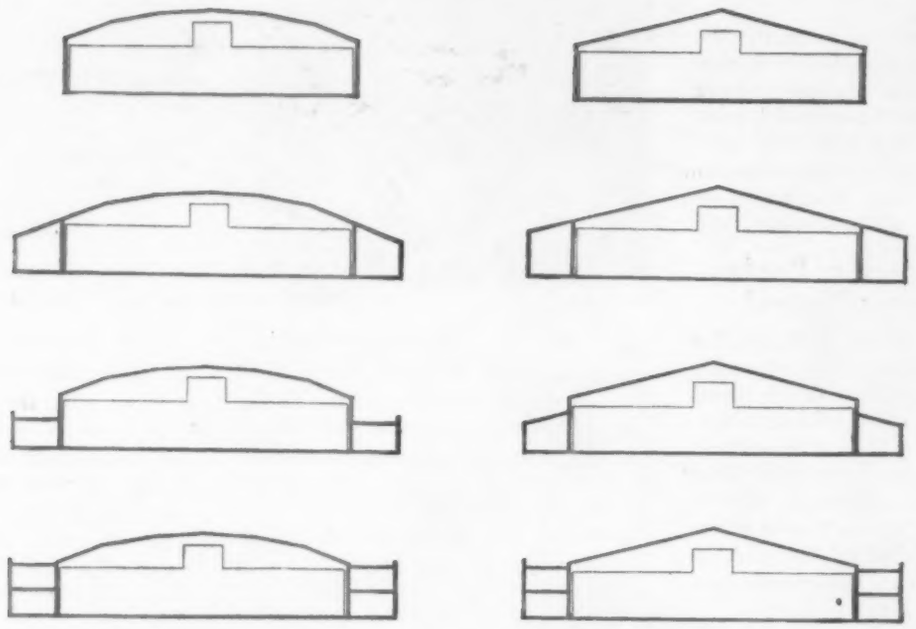

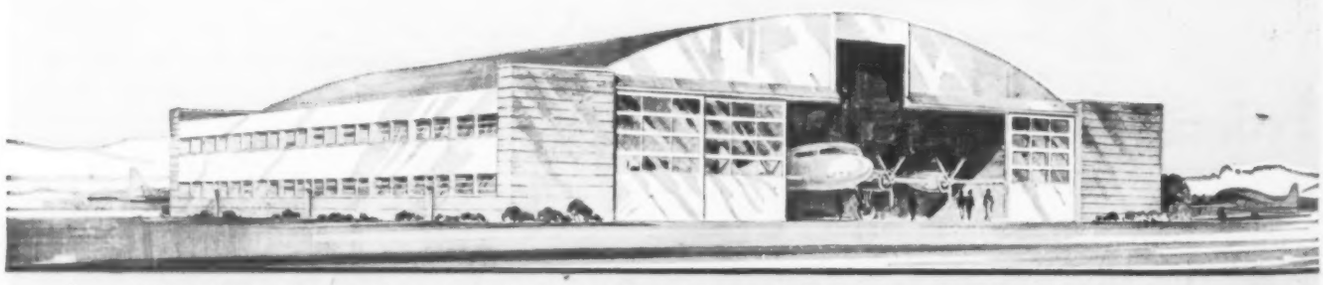

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Our Municipal Notebook

Brakes Bad on One Out of Seven Cars Checkup Shows

THE checkup of the brakes of 1,884,619 cars in 47 states and the District of Columbia made last spring by the International Association of Chiefs of Police found 268,811 cars defective—that's one in seven. The highlights and the statistics of that "Brake Emphasis Program" are presented in a report issued under the auspices of the Shell Oil Company in cooperation with the Chiefs of Police and the Automotive Safety Foundation.

Traffic accidents in 1944 cost 24,300 lives and 850,000 personal injuries—70,000 of the injuries being permanent. More than half of the casualties were war workers—nearly 13,000 killed and 450,000 injured.

One-sixth of the passenger cars scrapped in 1943 were traffic casualties, according to the National Conservation Bureau. Others were wearing out so quickly that at the war's close, an estimated 4,000 vehicles were disappearing from the highways every day. From an all-time high of 28,000,000 passenger cars in use in the United States at the end of 1941 the total dropped to approximately 23,500,000 at the end of the war.

Condition Will Persist for Several Years

With the war over it is estimated that more than 20,000,000 cars will be sold during the next five years and the nation's supply will be back, by 1948, to the 1941 level, in numbers and average car age.

Thus for several years yet, there will be antiquated cars with brakes loose and other equipment in dangerous condition amid the reviving traffic on the streets and roads, unless the lesson of this comprehensive checkup and similar warnings succeed in producing a sobering impression on those who drive automobiles.

Philadelphia Restricts Parking

COUNCILMAN George Maxman of Philadelphia, Pa., announces that, beginning January 2, daytime parking will be abolished for a ninety-day trial period on several principal streets in the business-shopping district. Even the unloading of trucks will be prohibited on Chestnut Street between 8 and 9:30 a.m. and on Walnut Street between 4:30 and 6 p.m.

Caution at Corners

Importance of the yellow caution light is stressed in this Aetna Life Insurance Co. poster

More Municipal Airports!

GREAT American cities of the future will grow where modern airports are developed, just as in the past they grew with the development of great harbors and railroad terminals.

Trouble looms for communities which neglect their airports, just as cities languished decades ago when they failed to recognize the importance of railroad terminals and harbors. It is ironic that a nation like ours should be caught so completely off guard in the matter of airports and airport facilities in the face of such significant developments. Yet with few exceptions, most airports, their hangars, terminals, and related facilities are woefully inadequate and obsolete in almost every particular. Virtually overnight commercial aviation will jump from a shoestring operation to one of great business enterprise. Pennsylvania-Central Airlines alone will offer this spring 8,000 air passenger seats daily.

Groups opposed to airport construction and expansion projects forget many things in our past and present transportation history: the land grants, tax exemptions, and other outstanding aids granted the railroads in their infancy, adolescence, and beyond—at the taxpayers' expense; the national and state highway system, for business and trucking companies, built at taxpayers' expense; river and harbor improvements, creation and maintenance of navigational facilities, for shipping of all kinds, at taxpayers' expense. They also ignore the fact that where there is any real traffic potential, in the more densely populated areas, an airport can be operated and maintained on a self-supporting basis, at no expense to the taxpayer.

I feel that one of the most serious threats to the proper development of the aviation industry, in the public interest, is the plan for "integration" of transportation — waterways, highways, railroads, and airlines—under control of the railroads. Such a program not only would block the natural progress of aviation, but also calls for a giant monopoly that would cripple, if not entirely destroy, the independent air carriers which have brought the industry to its position today.

C. BEDELL MONROE,
President, Pennsylvania-Central Airlines (PCA).

"Lifestream of the City"

THE General Electric Company has produced a modern transportation film with the theme that "city planning should begin with transportation." Its intent is to convince city officials, city planning agencies, and the public that healthy public transit is indispensable to healthy community life and growth. The "publicity" for this film, which runs for 25 minutes, emphasizes the commanding place of the city government in modern city transport.

It is appropriate that General Electric should have produced this film, for GE was one of the first elements of the transit industry to see that city governments are the key to better local transportation—better for the transit companies and manufacturers as well as for the riding public and its local political representatives.

The late Charles Gordon, when he was president of the American Transit Association, was another who saw the advantage of getting public officials to understand the full importance of transit.

Perhaps indeed he felt that his had been a voice crying in the wilderness, for he welcomed the opportunity in 1936 to cooperate with THE AMERICAN CITY campaign to promote genuine cooperation between municipal officials and the transit industry. The Ohio Brass Corporation has also been interested in our efforts to interpret the trolley coach and the President Conference Committee street car and motor coach to our readers.

Preview OF A NEWLY DESIGNED HORTON

Elevated Water Storage Tank

• *HERE* is an artist's conception of a new 1,000,000-gal. Horton elevated water storage tank which we designed for the city of Columbia, Mo. This structure will be 134 ft. to bottom and 259 ft. to top. The tank itself is spheroidal in shape and is supported on two rings of cylindrical columns with a central riser of similar diameter.

The advantages of elevated water storage are recognized today more than ever. Despite the abnormal conditions that have prevailed the last few years this type of water storage has helped to lower pumping costs, provide more even distribution pressures, and provide an adequate reserve for fire protection . . . for many a municipality.

Large capacity Horton elevated water storage tanks, like the one shown, in addition to symbolizing *good water service* also speak well for the progressiveness and farsightedness of the municipal officials and water works engineers who recommend their installation.

Our engineers are ready to work with you in designing a Horton elevated water storage tank to meet your particular requirements. Write our nearest office today.

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Los Angeles 14.....1403 Wm. Fox Building

Chicago 4.....2127 McCormick Building
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Atlanta 3.....2114 Healey Building
Washington 4 .....703 Atlantic Building
Detroit 26 .....1501 Lafayette Building

Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

Water Supply and Treatment

Why Cast Iron Pipe Breaks

THE chief reason for the occasional breaks in cast iron pipe is faulty construction that forces the pipe to act as a beam or a ring and thus produces unnatural excessive stresses in it. This was pointed out by Thomas F. Wolfe, Research Engineer, Cast Iron Pipe Research Association, in a talk before the Four States Section of AWWA in Baltimore recently.

A study of pipeline breaks in various cities made by the association, indicated the following causes:

	Breaks
Faulty construction and other ground interference	58
Excessive pressure	11
Corrosion	10
Faulty pipe	5
Excessive load	5
No recognizable reason	37

Pressure, occurring because of water hammer when pumping is difficult, or when fire hydrants or valves are shut off suddenly, should never be so great that the pipe will not stand it. Tests show that a 6-inch cast iron pipe will stand an internal pressure of 2,200 psi, or well beyond the stress imposed by water hammer.

Shrinkage from temperature also has been regarded as the cause of pipe breakage. The greatest range of temperatures that a pipe will have to stand, Mr. Wolfe stated, would be from 120° to 32°F. which would produce a stress of 7,000 psi, materially less than the pipe can stand. Vibration also has been claimed as a reason, however this cannot be justified since even vibration from trains is not as great as the effect produced by pumps in their operation.

Corrosion, Mr. Wolfe pointed out, can be prevented by a non-corrosive lining, or by using a non-corrosive backfill such as sand if the pipe must go through a marshy area.

Most pipeline troubles can be eliminated, Mr. Wolfe concluded, by regular inspection to see that the pipe is bedded evenly in its trench, and that it does not rest on a rock or similar underground obstruction. The construction of bell holes by trenching machines, he said, is generally undesirable.

A Few Facts on Tastes and Odors

HERE are a few salient points concerning factors involved in taste and odor control brought out by John L. Radcliffe, Chemist for the Elizabethtown Water Co.; and winner of the Fuller Award for the New Jersey Section of AWWA for 1946. Mr. Radcliffe presented these facts before a recent AWWA meeting.

1. A good water plant operator should guard against developing an immunity to odors. One safeguard is to drink odor-free water exclusively at least one day a week. Some water works men have developed immunity even to such strong odors as chlorine.

2. Operators should run threshold odor tests on their water supplies periodically not only as a check against themselves but also as a check on plant operations.

3. Activated carbon, when used for taste and odor control, should be applied ahead of filtration and preferably prior to coagulation. In this way dosages may be employed without adverse effects on filter operations; furthermore the carbon, settling out with the sludge, stabilizes the organic matter in the deposited sludge.

4. Since activated carbon is not dissolved in the water, there is no danger from an overdosage. (However, you do have to pay for the unnecessary overdose of activated carbon.)

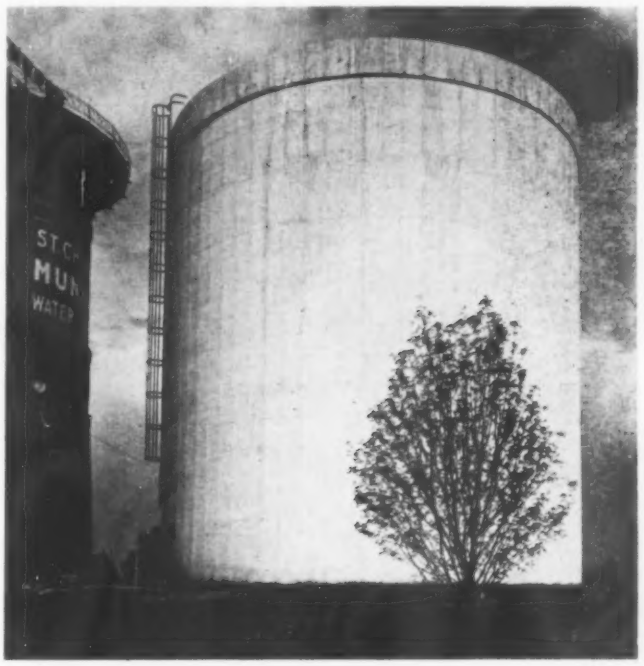
5. Algae, with their detrimental effect on tastes in water, can be controlled by dusting reservoirs and basins with activated carbon to provide a screen on the surface which prevents the penetration of sunlight and hence the growth of algae. Vester Opie at Paris, Mo., was one of the first to employ this method successfully.

6. You will generally get much more consistent results by using activated carbon continuously than by trying to adjust its use to threshold odor concentrations exceeding specific ranges. Objectionable tastes and odors have a habit of appearing suddenly and may not be anticipated by laboratory tests. The low cost of activated carbon justifies a continuous treatment similar to chlorination.

Water Tower Uses Air-Entraining Cement

THREE years of experience with the St. Charles, Mo., water tower has been very successful, Superintendent Walter G. Oelklaus reports. The tower, which holds 1,000,000 gallons, is made from prestressed concrete according to a design by Wm. Hewitt, Chicago, and uses Atlas Duraplastic air-entraining cement for weatherproofing.

Air-entraining cement has been widely used in concrete for street construction to give added protection against possible scaling when various chlorides are applied, as for de-icing purposes. However, its other qualities have been so satisfactory that many engineers are specifying it for other purposes where concrete is exposed to the weather. These include sidewalks, retaining walls, bridge abutments, foundation walls, dams, as well as water towers, similar to the one at St. Charles, Mo., shown below.



Looking at St. Charles' million gallon prestressed water tower

meet this TOM • CAT

on a dark corner

Erect the new TOM•CAT next to an ordinary street name sign—and compare it *at night*. See how sharply readable, how highly reflective it is from any angle . . . how it slants down to eye angle. TASSCO designers have actually revolutionized the conventional street name sign: TOM•CAT is highly functional *both* day and night.

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- **revolutionary design** . . . new, tear-drop shape slanted to correct eye angle.
- **modern construction** . . . all aluminum . . . weatherproof . . . boltless . . . strengthened by center staff.
- **no higher cost** . . . comparable in price to any framed porcelain enamel or embossed sign.

unretouched photograph

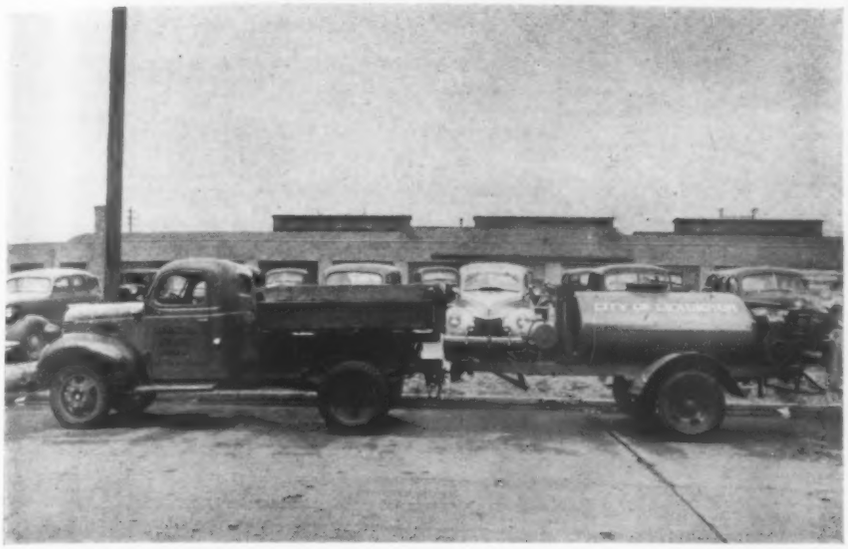
unretouched photograph

TRAFFIC & STREET SIGN CO., 83 Foundry Street, Newark 5, N. J.

TOM•CAT is surprisingly reasonable in cost. TASSCO advisory service is ready to work with officials in adapting this new sign to local requirements. Full details on request.

Street Maintenance

Portable Street Repairs



Lexington, Ky., can use big-time construction methods on a small job with its new portable power distributor. The distributor is a 250-gallon capacity Standard Steel Works tank powered by a Waukesha motor

Cincinnati Improves Abrasive Spreader Mechanism

A COMBINATION either of sand and salt or cinders and salt is used by the city of Cincinnati to fight icy road conditions. When a light skin freeze covers the streets, city maintenance forces use the sand-salt combination; if a heavier layer of snow is compacted on the surface, cinders and salt find employment.

For a number of years, C. E. Brokaw, Superintendent of the Highway Maintenance Division of Cincinnati's Department of Public Works, used a type of spreader to apply these salt-abrasives that required a man in the rear of the truck. However, for reasons of safety he purchased an agricultural type of spreader which eliminated the need for the man in the relatively dangerous position. However, the spreader did not work too well. It took too long to attach it to the truck and did not do an efficient job of spreading the abrasives on the streets.

Consequently, last year Superintendent Brokaw purchased for trial one W. K. Manufacturing Co. spreader. This, he reports, proved very satisfactory, giving a maximum spread of about 25 feet with the gate fully open. His experience encouraged him to purchase five more, thus reinforcing himself for this winter's snows.

Cincinnati's maintenance crews have simplified the operation of the spreader by developing a hydraulic mechanism which facilitates handling. The mechanism makes it possible to shut off the spreaders at an intersection if necessary and start them again after passing the intersection.

Spot Checking Street Maintenance Work

THE BUFFALO, N. Y., maintenance department fills holes in dirt streets with cinders. Some are graded and receive an application of dust-laying oil. Holes in macadam surface are filled with cold patch. They are treated with about one-fourth gallon of tar and 25 pounds of one-eighth inch stone per square yard. Brick pavements are repaired with cold patch or asphalt. Concrete pavement holes are temporarily filled with cold patch and the surface is treated with tar and one-eighth inch stone.

Lansing, Mich., reports no dirt streets, all being either paved or graveled. All graveled streets get a calcium chloride treatment.

Utilities making excavations in Lansing city streets must backfill their excavations with sand and remove the excavated material. On all paved streets, after the excavation, the city applies bituminous surface and maintains the patch until complete repair has been made.

Berkeley, Cal., reports unusual success in the use of the heater planer. The planer is used to remove rough places to resurfacing.

Cleaning Pittsburgh's Residential Streets

In a recent big snowstorm in Pittsburgh officials put to work a Trojan one-man speed patron equipped with a Vee-plow. This picture shows it at work in front of the old Westinghouse estate which was willed to the city of Pittsburgh by George Westinghouse and is now known as Westinghouse Park. The regular 10-foot maintaining blade is in the down position, supplementing the clearing action of the Vee-plow. An International tractor powers the Trojan patrol

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✓ The reliable *automatic* operation provides 100% enforcement efficiency with resulting high revenue.

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✓ PARK-O-METER provides adequate revenue protection through heavily constructed, separate money compartment; the pick-proof lock, and by the built-in money register.

✓ Since collection and handling of revenue is a major factor in parking meter operation, PARK-O-METER is carefully designed to make this job economical. The improved coin receptacle provides either automatic dumping or sealed-container collection. Adequate capacity eliminates need for frequent collections and the smooth contour and light weight of receptacle facilitates quantity handling. The hinged coin door on sidewalk side gives convenient access.

THE ORIGINAL *Carl Magee* PARKING METER

Opening coin door by a single, quick motion brings out receptacle for easy exchange — or, when using PARK-O-METER Collector Device, automatically dumps revenue into container.

PARK-O-METER OPERATION MEANS ADDED REVENUE. PARK-O-METER DESIGN MEANS REVENUE SAVED. WRITE US TODAY. ORDER YOUR PARK-O-METER INSTALLATION NOW.

Magee-Hale PARK-O-METER COMPANY

COMMERCE EXCHANGE BUILDING • OKLAHOMA CITY 2, OKLAHOMA

MACNICK COMPANY, *Manufacturers*, TULSA, OKLAHOMA

Sewerage and Sewage Treatment

Melrose, Mass., Fiber Pipe Project

LAST summer fiber pipe was laid in our sewer system in an extension on Wentworth Road. The work proceeded at an unusually rapid pace, as the pipe is light and easy to handle.

The two features of this installation that impressed me particularly were: (1) the approximately 200 feet of 6-inch pipe were laid in less than one hour by three men who had never used this type of pipe before, and (2) the tightness of the joints after the pipe had been laid. As soon as the pipe had been laid, the lower end was complete blocked and the pipe was filled with water to determine whether there was any weeping at the joints. Since the pipe had been laid in a relatively steep grade, this afforded a very satisfactory test. Not one of the joints showed any evidence of weeping.

This picture shows the fiber pipe line between two other pipe lines. The middle line provides sewerage facilities to houses not previously served, while added assurance of ample water in this area is furnished by the water pipe at the left which connects the line on Standish Road with that on Wentworth Road in Melrose. The drain pipe on the right with two catch basins at the top of the hill solves a surface drainage problem which has been a neighborhood annoyance for many years.

GLEN S. WEEKS
Superintendent of Public Works

Baltimore Builds New Sewerage Units

INCREASED sewage flow at the Baltimore sewage treatment plant has made it necessary to increase the sludge handling capacity of the plant. George E. Finck, Sewerage Engineer for Baltimore's Bureau of Sewers, reports that two heated sludge tanks are now under construction, each with a 200,000 cubic foot capacity. Also being installed are three gas boilers to heat the sludge tanks. The boilers will utilize the digester gas for fuel. Furthermore two additional vacuum filters are being added to the vacuum filter building. These probably will be in operation early this year.

Dilemma of the Unused Sewers

EL SOBRANTE, CALIF., built a brand new sewer system recently but was embarassed to find that residents could not legally connect.

The $250,000 sewer project was completed last fall, yet householders who tried to use the new system discovered that they could not do so until apportionment of assessments in connection with the project was completed. This entailed a delay of four to six weeks. However, with the collective action of Fritz Carlfield, Secretary of the San Pablo Sanitary District; M. G. Moitoza, District President; and Francis J. Healey, Legal Adviser, a solution was found. By taking out $100,000 limited public liability insurance, contractors were allowed to make the connection to the new sewer system. This action protected the property owner and the municipality in the event that accidents might occur from open ditches or washouts.

Colorado's Experience With Sanitary Districts

SANITARY districts have provided a method for making water and sewerage improvements economically sound in Colorado, Emory L. O'Connell disclosed recently before the Rocky Mountain Section of AWWA. Prior to 1939, Mr. O'Connell stated, most urban improvements such as sewers and street construction in Colorado were financed by the special assessment method. There was no provision for districts outside incorporated areas. Moreover, overlapping indebtedness was often so great that, in case of default, sale of the property would not clear the respective liens incurred in the sale of bonds. City officials then attempted to make the bonds more attractive by a guarantee of payment through general obligation of the city, but the Colorado Supreme Court declared this guarantee unconstitutional.

To overcome these difficulties an act of the state legislature was passed in 1939 and amended in 1941 which provides for the formation of water and sanitation districts in which revenues can be raised by levying taxes against all real and personal property in the districts. In the latter year the enabling act was extended to fire districts. A district may be entirely or partially within an incorporated municipality. Furthermore, the area embraced need not consist of contiguous areas, and anyone is entitled to vote on the question of a sanitary district who is a regularly qualified voter at general elections and has paid a tax on real or personal property in the district in the twelve months immediately preceding the time when the subject received attention.

District courts are given jurisdiction over the formation and operation of a district. A petition for formation must be executed by at least ten percent of the taxpaying electors. A court hearing on the petition then sets the time for an election to vote on the formation of the district and the election of directors, if the district is to be organized. After organization, elections are held every two years for directors of the district. Water and sanitation districts have five directors and fire districts three.

Minnesota Plans Sewerage Projects

APPROXIMATELY thirty communities in Minnesota are now working on plans for new sewage treatment plants or improvements to existing plants, H. A. Whittaker, director of the division of sanitation of the Minnesota Board of Health, said recently. Among these communities are Rochester, Faribault, Crookston, Anoka, Waseca, East Grand Forks, Shakopee, Madison, and Aitkin.

At present 112 Minnesota cities and villages have sewage treatment plants using secondary treatment; 100 have primary treatment; and 116 need new facilities.

To encourage sewage treatment by industries, the Minnesota Water Pollution Control Commission recently endorsed HR 3922, a bill in Congress granting income tax exemption to industries for the cost of such plants during the years 1946 to 1951 inclusive.

PEERLESS PUMPS

UPON THE STRONG, GREATER STRENGTH IS BESTOWED

A Statement by FOOD MACHINERY CORPORATION in regard to *Dayton-Dowd*

An important advance in the history of the pumping industry now makes available a new conception of integrated pump service to customers.

Dayton-Dowd, long associated with sustained high quality—a distinguished name on centrifugal pumps—has become an integral part of the Peerless Pump organization.

To the prestige and enviable reputation of *Dayton-Dowd* have opened new horizons of progress and wider scope for service by alliance with the nation-wide facilities of *Food Machinery Corporation.*

Thus, to purchasers of both Horizontal and Vertical centrifugal pumps is available the coordinated engineering and research leadership that produced the FMC *"Water Buffalo"*— the first battle-proved amph-trac.

This merger of broad installation-wise experience, modern technical research and alert engineering talent assures our customers for all types of pumps that the name *Peerless* stands as the guarantee for quality and progress.

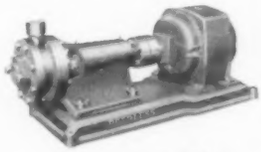
●

Peerless performance—all that the name implies.

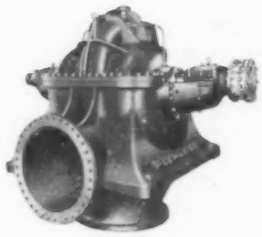
PEERLESS HORIZONTAL PUMPS

—formerly Dayton-Dowd

Type A—Dual Drive



Type T—Turbine



Type A—Large Capacity

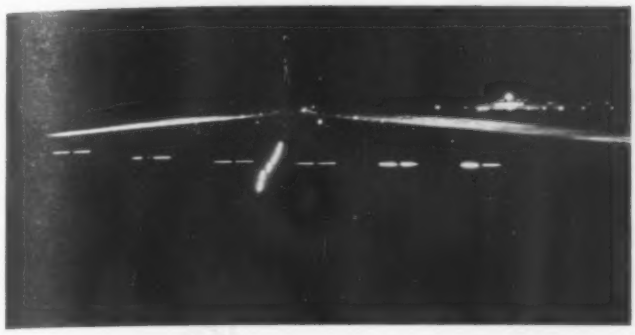
F.M.C. builds with STEEL

PEERLESS PUMP DIVISION—FOOD MACHINERY CORPORATION

Factories: Los Angeles, Calif. Quincy, Illinois. Canton, Ohio.

WAR-TIME BUILDERS OF THE VICTORIOUS "WATER BUFFALO". PEACE-TIME BUILDERS OF TOP-FLIGHT PUMPS.

Aviation and Airports



Unique landing strip identification system employs a cross of which each diagonal is 90 feet long, and a 100-foot long arrow outlined in bright colors at the end of each runway

Better Landing Strip Identification

THE pilot approaching a busy airport needs unmistakable guidance as to what runway to land on and in which direction to come in. Lack of clear signals may spell disaster. Illumination engineers at the Westinghouse Lighting Division have supplied the answer with a unique "traffic light" that employs a large cross and arrow outlined in bright colors at the end of each runway. The cross, of which each diagonal is 90 feet long, is outlined in neon lamps. The arrow, 100 feet long from end to point and 35 feet across the head, is made of neon (green) lamps. When a landing is to be made at night, all the red crosses are set to flashing while the green arrow at the landing end of the strip in use is lighted. Each cross consists of twelve pairs of high-intensity cold-cathode lamps physically similar to the new long fluorescent lamps. Each arrow consists of ten pairs of lamps. Each pair of lamps consumes 225 watts, so that sufficient light is produced to make the markers visible even under adverse atmospheric conditions.

Airports for Sale

THE Civil Aeronautics Administration will play a large part in the disposal program of surplus airports, according to a recent report from the Department of Commerce. The Reconstruction Finance Corporation will be the actual disposal agency but the burden of investigation and recommendations for each property will rest with CAA. The CAA reports will indicate what portion of the property should be classified for airport use, in light of the civil aviation needs of the community and its ability to undertake maintenance obligations. In some cases, only a part of the airport will be turned over to a local government; in others, a field may not fit the "National Airport Plan" and should be sold for non-aviation uses.

Airport disposal will be carried out under the terms of Surplus Property Administration Regulation 16, which provides that federal agencies be accorded first priority, and state and local governments second priority. Transfer to these agencies may be made without cash payment if the specified conditions as to maintenance or other matters are accepted. The CAA recommends to whom a grant should be made and also must approve transferral of a surplus airport from one agency to another. Sales to non-government agencies will be made at a fair value, "the maximum price which a well informed buyer . . . would be warranted in paying. . . ."

All recommendations of the CAA will be reviewed by a Surplus Airport Disposal Committee composed of representatives of the Secretary of War, Secretary of Navy, Administrator of Civil Aeronautics, RFC, and the Surplus Property Administrator.

Does an Airport Damage Surrounding Property?

ESTIMATED loss in value of property surrounding major airport sites is considered in the airport plan for the Detroit metropolitan region prepared for the Detroit aviation planning authority, the American Society of Planning Officials reports.

In the so-called Eight Mile-Wyoming site, which is being urged by the Detroit Board of Commerce, the appraisers show a present value of $4,160,000 for 1200 acres of subdivision. They then show a 74.4 percent loss, or a loss of $3,960,000 to property within one-half mile surrounding the site.

Within the area one-half to one mile surrounding the site, the appraisers show a 71 percent loss, or a total of $4,490,500 affecting 2,960 acres of subdivision. The appraisers' total loss in value for farm buildings, residential buildings, subdivisions, and farm land is $12,962,000 at this particular site.

At the site recommended by the consultants for the airport plan, namely the Gulley-Fort project, the real estate appraisers show a total loss of $6,191,800 to surrounding property within a one-mile zone.

The authors of the report are of the opinion that the aircraft construction industry will greatly reduce nuisance factors in new planes so that recovery of much of the loss in value of property would result.

The Society points out that certain important questions regarding location and construction of airports are raised by the report. If such loss actually takes place, how will it be compenstated for? If the airport were constructed at the site shown, would surrounding property owners be paid this assumed loss, and if it is paid, how would it be recovered if the nuisance were later reduced? The Society states that if the appraisers' report is correct, it is hardly conceivable that any major airport could be located anywhere without paying some damages to the owners of surrounding property.

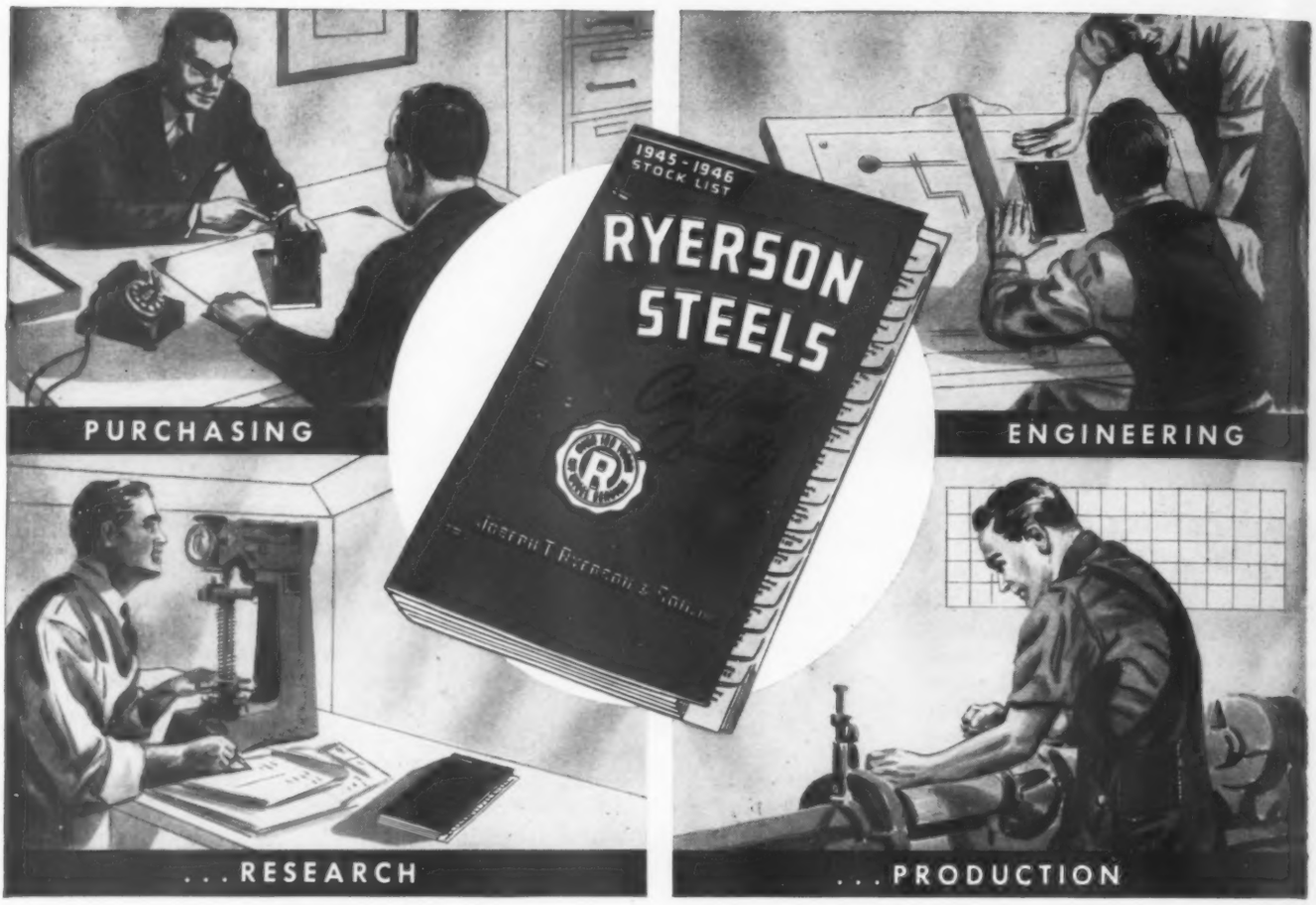
Flying Boom Depends on Airports

THE United States has the makings of a "real civil flying boom," but it can be "a brief bubble that bursts or a sound and lasting growth," depending on the development of better aircraft and a better airport system, Assistant Secretary of Commerce William A. M. Burden told the American Road Builders Association recently.

Pointing out that "we have about 3,000 airports for the more than 16,000 communities of the nation," Mr. Burden declared that "no matter how fine a plane the aircraft industry builds, it will be of little value unless our present airport system is improved drastically."

Mr. Burden reported that "we have improved our airport situation somewhat during the war years, but not in the direction most needed for peacetime aviation." There are 800 of the larger airports today as against none in 1939. However, the total number of small airports, he said, has climbed only a little beyond the 1939 level, despite tremendous increases in the number of airport users.

He expressed the hope that the House would soon reach a compromise on the federal aid airport bills.



Are You Using this Steel Guide?

The Ryerson Stock List and Steel Data Book serves every department

Detailed information on Ryerson steel—descriptions, specifications, sizes, extras, etc.—is at your finger tips. In addition there are many pages of data covering: Average physical properties, AISI-SAE and NE steel compositions, Ryerson steel identification and other useful facts and figures—all in the new Ryerson Stock List and Steel Data Book.

It simplifies the work of every department in your company. With this complete steel guide, one order, one shipment, one invoice can often cover your warehouse steel needs.

Handy, pocket size . . . punched for your ring binder and index tabbed for quick reference, this book is your ready guide to steel specifying and buying for 1946. It is invaluable to the occasional as well as the regular steel user. Copies have been widely distributed, but, if you do not have one, contact our nearest plant.

Product information includes data on: Beams, Channels, Angles, Hot and Cold Finished Bars, Plates, Sheets, Alloy Steels, including Heat Treated and Special Alloys, Allegheny Stainless, Tool Steel, Mechanical Tubing, Boiler Tubes, Reinforcing Bars and Accessories, Inland 4-Way Floor Plate, Babbitt, Welding Rod, Bolts, Rivets, Metal Working Machinery and Tools, etc.

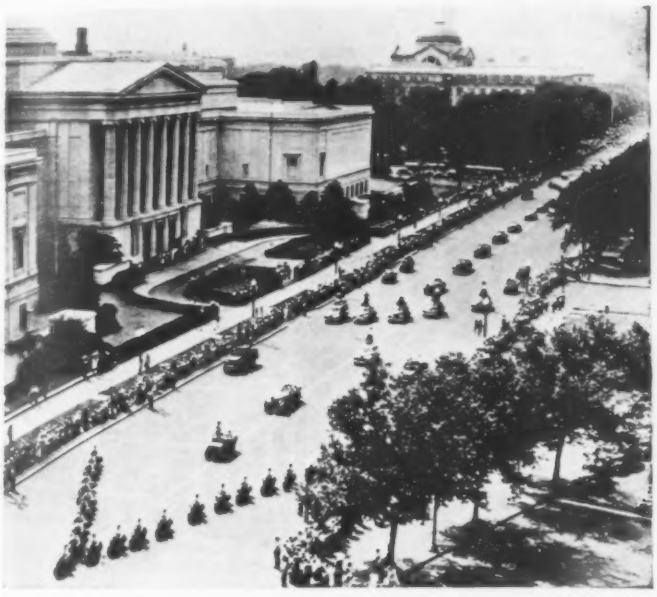
RYERSON CERTIFIED STEELS

Joseph T. Ryerson & Son, Inc. Steel-Service Plants at: Chicago, Milwaukee, Detroit, St. Louis, Cincinnati, Cleveland, Pittsburgh, Philadelphia, Buffalo, New York, Boston.

RYERSON STEEL

Public Safety

Washington, D. C., Wants 33 Percent More 'Cycle Officers



In national parades honoring our returning war heroes, the District of Columbia motorcycle corps is used in escort work. The parade shown here honors Gen. Jonathan Wainwright. Harley - Davidson mounted escorting police form a victory V

THE motorcyle squad of the Metropolitan Police Department is composed of five sergeants, four corporals, and 67 motorcycle officers, and thirteen men still are in the military services.

While their primary duty is the protection of life and property, the preservation of the peace, and the enforcement of all laws and regulations, with particular emphasis on those violations which contribute to traffic accidents, they are also called upon many times during the course of the year to provide motorcycle escorts for visiting dignitaries and for parades. The squad is divided into six sections of approximately ten men each. Public parks in the District of Columbia are under the direct supervision of the United States Park Police, commanded by Captain Mark H. Raspberry. This organization has approximately 89 members, 25 of which are motorcycle officers.

A motorcycle squad of one hundred men is the ultimate aim of the Metropolitan Police, and since each man is assigned to an individual motorcycle, new equipment is on order, and we have also been fortunate in securing the delivery of a limited number of new motorcycles in recent months.

The training period for our men consists of three weeks' instruction in motorcycle riding, pacing (checking speeding vehicles), overtaking and stopping motorists, escort duty, etc. The applicants are then graded by the instructors on their aptitude, personality, appearance, knowledge of the traffic regulations, and are selected accordingly, with the idea of securing the best material available for this important assignment.

HARVEY G. CALLAHAN,
Acting Superintendent,
Metropolitan Police Dept.,
Washington, D. C.

"Old Loudmouth"

General Electric's new loudspeaker is being demonstrated to police and Coast Guard officials. Under favorable conditions "Old-Loudmouth" can send messages up to four miles across water. Even a whisper can be carried a mile by the unit which can over-ride high noise levels to deliver its message

Fire Chiefs' Membership Drive Successful

FROM January 1, 1945, to December 17, 1945, 2,066 new members joined the International Association of Fire Chiefs. Total membership was 4,277 at the end of 1945 which is the largest figure in the past 10 years.

Plans are being made now by the Association for the annual Fire Chiefs Conference to be held in Cleveland.

Legible Traffic Signs

Large traffic and directional signs mean clarity and effectiveness as shown by these signs of the Signal Service Corp. Legibility is figured at 50 feet per inch of letter type and 10 seconds warning time is necessary for proper car control

Prize for Best Fire Extinguisher Incidents

A PRIZE contest open to industrial and municipal firemen, safety engineers, and home owners is announced by F. Dale Bacon, General Manager of the Fire Extinguisher Division of The General Detroit Corp. The subject is "My Most Exciting Experience with a Portable Fire Extinguisher." Prizes of $25 each month for the next six months will be paid to the best entry submitted between the first and last day of each month.

The entries will be judged by the particular experience described, and not by the manner in which is it presented. It is important that entries apply to actual use of the portable fire extinguisher in an emergency, either by the contestant or someone known to the contestant.

Entries for the first month's prize are now being accepted. All material received on or before March 31st will apply to this first period. Applicants east of the Rocky Mountains should address the Contest Department, The General Detroit Corp., 2272 E. Jefferson, Detroit 7. Those west of the Rockies should address The General Pacific Corp., 1800 S. Hooper Street, Los Angeles 21, Calif.

Another MILLER METER *First*

TEN ~~FIVE~~ PENNIES HANDLES UP TO*

GIVES FULL TIME FOR EVERY COIN

*OR TWO NICKELS

READ WHAT THE
CITY OF NEWARK, OHIO
says . . . one of many letters received from cities where 10-Penny, 2-Nickel Miller Meters are in operation.

January 7, 1946

We now operate 435 Millers and believe ours is one of the finest Parking Meter installations to be found anywhere, particularly since we changed to the 10-Penny 2-Nickel basis. This operation meets with the complete approval of all concerned . . . and coupled with most satisfactory operation during winter as well as summer, extremely low maintenance cost, and a steady high revenue, makes us mighty proud of our Miller Meter installation.

This is IT . . . the ACCUMULATIVE Multiple-Coin Miller Meter that permits each and every parker to purchase *exactly* the time desired . . . whether *one* cent's worth giving 12 minutes of time . . . *six* cent's worth (6 pennies, or 1 nickel 1 penny) giving 72 minutes of time . . . or *ten* cent's worth (10 pennies, or a nickel and 5 pennies, or 2 nickels)giving 120 minutes of time. Cities as well as motorists like it. For never is this meter a *thief* — it cannot accept a coin and give nothing in return. There can be no *complaints*. And, if time remains from a previous parker (for example 24 minutes) and five cents is deposited, the parker gets a total of 84 minutes. ● The beauty of it all is, that any Miller Meter can be changed easily and inexpensively to this new, modern operation. To learn what cities think about this genuine ACCUMULATIVE 10-Penny 2-Nickel Meter, write us today.

DUNCAN METER CORP.
835 NO. WOOD STREET CHICAGO 22, ILLINOIS

Stop--Check and Mail

Please check over the list of interesting catalogs below obtainable free of charge and either write direct to the manufacturers for their literature, or, if you prefer, put a circle around the identifying numbers below to indicate the catalogs you want, mail this coupon to The American City Magazine, 470 Fourth Ave., New York 16, and we will see that catalogs are sent to you without expense or obligation on your part. 2/46

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Name ---------- Position ----------

Address ----------

Oxygen Breathing Apparatus

532. Municipal and fire department officials will be interested in Bulletin BM-8 offered by Mine Safety Appliances Co., Braddock, Thomas and Meads Sts., Pittsburgh 8, Pa., on its oxygen breathing apparatus. This new apparatus generates its own oxygen as you breathe. A replaceable chemical canister does the job of supplying the oxygen protection needed in unbreathable air. Bulletin BM-7 is also available on the demand-type oxygen mask which supplies oxygen direct from refillable cylinders.

Spreader for Ice Control

533. Municipal officials in charge of ice control work will want complete information being offered by The Flink Co., Dept. 1, Streator, Ill. The company points out that its self-feeding spreader enables you to get icy spots covered faster, since the operator can speed to danger spots, start spreading without stopping the truck, finish the spreading, and continue on without stopping.

Reduce Out-of-Service Time on Hydrants

534. If you are looking for information on hydrants that can be repaired easily you will want data from R. D. Wood Co., Public Ledger Bldg., Independence Square, Philadelphia 5, Pa., on its Mathews hydrant. In the event of trouble a spare barrel containing working parts can be slipped into the hydrant case and the damaged barrel can be repaired in your shop for use at another time.

Single-Acting Pile Hammers

535. Engineers and contractors will be interested in the addition of a standard line of single-acting pile hammers for use with heavy piles. McKiernan-Terry Corp., 19 Park Row, New York 7, N. Y., is offering a new 16-page bulletin of detailed information describing the special purposes for which these hammers are intended. A table based on an established formula for bearing power of piles offers help in selecting the correct size of hammer.

Power Mowers for Lawn Care

536. Park maintenance officials and those in charge of public buildings and institutions interested in complete grass cutting service will want the literature being offered by Whirlwind Lawn Mower Corp., 730 Virginia St., Milwaukee 4, Wis., on its whirlwind rotary scythe power mowers. This explains the whirlwind rotary scythe principle and shows how it meets all grass-cutting conditions, going through neglected growth, tangled masses, trimming overhanging shrubbery, and cutting close to trees, fences and walls.

Movie Film on Traffic Congestion

537. Municipal officials and civic and business groups interested in traffic problems can secure from the General Electric Co., Visual Education Section 1, River Rd., Schenectady 5, N. Y., a new 16 mm film on this subject. "Lifestream of the City" digs down to the roots of city transportation, making the basic causes of congestion easy to understand. It also gives a practical basis for selecting the type of modern transit vehicle that best fits your city's needs.

Rotary Snow Plow for Heavy Work

538. Municipalities and airports confronted during the winter months with heavy snowfalls will be interested in literature from Wm. Bros Boiler & Mfg. Co., Minneapolis 14, Minn., on its Sno-Flyer rotary plow. It is equipped with revolving feeder rake plates which shatter the snow and ice with powerful blows and may be used in various positions for normal or excessive snow removal work. All operations are hydraulically controlled from the cab.

Asphalt Mixing and Laying Machine

539. Here is a complete travelling asphalt mixer and paver requiring no separate loader, spreader or trailer to haul it from one job to another. Bulletin MP-46 is available from Hetherington & Berner, Inc., 731 Kentucky Ave., Indianapolis 7, Ind., on its Moto-Paver which mixes, spreads, and lays any type of mixed-in-place bituminous material to any road width, thickness, and crown condition.

Voting Machines

540. If you have no voting machines in your municipality, are you familiar with all the benefits they offer? Automatic Voting Machine Corp., Jamestown 55, N. Y., will send you literature discussing these benefits, including, among others, the elimination of spoiled or defective ballots, maintenance of absolute secrecy, assurance of mechanically accurate count, available results when the polls close, insurance of a permanent record.

Clearing, Grading, and Leveling Equipment

541. Any municipal official responsible for land clearing, grading and leveling work will want data from the Caterpillar Tractor Co., Peoria 8, Ill. Its line of products includes engines, tractors, motor graders, and earthmoving equipment.

Aerial Surveys

542. Perhaps aerial surveys are just what you need for an overall picture of your city to help you plan further projects successfully. Fairchild Aerial Surveys, Inc., 724 East 11th St., Los Angeles 13, Calif., will send you data on the expeditionary aerial surveys they have conducted in the fields of water ways, highways, traffic, utilities, pipelines, taxation, flood control, and city planning.

Pick-Up Street Sweepers

543. Street cleaning superintendents interested in street sweepers will want to have information from Charles Weinberg of The Wayne Co., 4910 Santa Fe Ave., Los Angeles 11, Calif., on its new streamlined pick-up sweepers. These are small, easily operated, and have a large capacity.

Light-Hauling Motor Trucks

544. City officials interested in a light-hauling truck for municipal work will want information from the Ford Motor Co., Dearborn, Mich. Among outstanding features of this company's trucks are side-mounted springs, three-quarter floating rear axle with straddle-mounted pinion, four double-action shock absorbers, a floor of heavy-gage steel surfaced with formed skid-strips and hardwood underflooring, and a tailgate that swings full down for loading.

Fibers for Sweeper Brooms

545. What type of fiber do you use for the broom of your mechanical sweeper? The Otto Gerdau Co., 82 Wall St., New York 5, N. Y., will send you details showing the advantages of using fresh broom fibers and information on the complete line of fibers they offer available in every type and size.

Sprayers for Large Trees

546. Have you 100-foot trees in your community that need spraying? John Bean Mfg. Co., 9 Hosmer St., Lansing 4, Mich., has a sprayer that will do the job on these or any other large trees which regular spraying equipment will not reach.

Trucks with War-Tested Engines

547. Here is a motor truck whose engine is a counterpart of one that proved its power, performance, and stamina during the war. GMC Truck & Coach Division, General Motors Corp., Detroit, Mich., will send you details on this gasoline engine and the ½- and 20-ton trucks it powers.

(Continued on page 21)

WINDOWS OF ALCOA ALUMINUM

READY TO BE SET IN PLACE when delivered to the job. Weatherstripping and operating mechanism are built into aluminum windows. They need no protective painting to safeguard against rusting or rotting.

HANDLING IS EASY because of the light weight of aluminum windows, and their unit construction. Erection goes fast, appreciably cutting your construction costs.

SIMPLY LINE THEM UP anchor in place, and they're ready for calking and glazing. Aluminum windows work smoothly, and they're easy to keep that way.

WINDOWS OF ALCOA ALUMINUM are neat and attractive. Their narrow metal sections make most efficient use of window openings, giving maximum glass areas. They are suited to any type of architecture.

Windows of Alcoa Aluminum will be made by leading window manufacturers. Consider them for your future new buildings and for replacements. Aluminum Company of America, 2172 Gulf Building, Pittsburgh 19, Pennsylvania.

Windows of **ALCOA** **ALUMINUM**

Vol. LXI, No. 2 **The American City** *February* 1946

The President on Public Works and Housing

Text of Two Sections of President Truman's Message to Congress of January 21, 1946

Public Works

DURING the war even urgently needed federal, state and local construction projects were deferred in order to release resources for war production. In resuming public works construction, it is desirable to proceed only at a moderate rate, since demand for private construction will be abnormally high for some time. Our public works program should be timed to reach its peak after demand for private construction has begun to taper off. Meanwhile, however, plans should be prepared if we are to act promptly when the present extraordinary private demand begins to run out.

The Congress made money available to federal agencies for their public works planning in the fiscal year 1946. I strongly recommend that this policy be continued and extended in the fiscal year 1947.

Essential Role of State and Local Governments

State and local governments also have an essential role to play in a national public works program. In my message of September 6, 1945, I recommended that the Congress vote such grants to state and local governments as will insure that each level of government makes its proper contribution to a balanced public construction program. Specifically, the federal government should aid state and local governments in planning their own public works programs, in undertaking projects related to federal programs of regional development, and in constructing such public works as are necessary to carry out the various policies of the federal government.

Early in 1945 the Congress made available advances to state and local governments for planning public works projects, and recently made additional provision to continue these advances through the fiscal year 1946. I believe that further appropriations will be needed for the same purpose for the fiscal year 1947.

The Congress has already made provision for highway programs. It is now considering legislation which would expand federal grants and loans in several other fields, including construction of airports, hospital and health centers, housing, water pollution control facilities and educational plant facilities, I hope that early action will be taken to authorize these federal programs.

While indicating that he would favor federal aid for the construction of local public works if the prospect of highly adverse general economic conditions should warrant it, President Truman, in his message last month on the State of the Union, urged that with respect to public works of strictly local importance, local governments should proceed without federal assistance except in planning.

The President's recommendations on Public Works and on a National Housing Program, as here quoted in full, merit careful study and effective cooperation by readers of The American City.

Federal Aid for Planning

With respect to public works of strictly local importance, state and local governments should proceed without federal assistance except in planning. This rule should be subject to review when and if the prospect of highly adverse general economic developments warrants it.

All loans and grants for public works should be planned and administered in such a way that they are brought into accord with the other elements of the federal program.

Our long-run objective is to achieve a program of direct federal and federally assisted public works which is planned in advance and synchronized with business conditions. In this way it can make it greatest contribution to general economic stability.

National Housing Program

Last September I stated in my message to the Congress that housing was high on the list of matters calling for decisive action.

Since then the housing shortage in countless communities, affecting millions of families, has magnified this call to action.

Today we face both an immediate emergency and a major post-war problem.

Since V-J Day the wartime housing shortage has been growing steadily worse and pressure on real estate values has increased. Returning veterans often cannot find a satisfactory place for their families to live, and many who buy have to pay exorbitant prices. Rapid demobilization inevitably means further overcrowding.

Rent and Price Control

A realistic and practical attack on the emergency will require aggressive action by local governments, with federal aid, to exploit all opportunities and to give the veterans as far as possible first chance at vacancies. It will require continuation of rent control in shortage areas as well as legislation to permit control of sales prices. It will require maximum conversion of temporary war units for veterans' housing and their transportation to communities with the most pressing needs: the Congress has already appropriated funds for this purpose.

The inflation in the price of housing is growing daily.

As a result of the housing shortage, it is inevitable that the present dangers of inflation in home values will continue unless the Congress takes action in the immediate future.

Legislation is now pending in the Congress which would provide for ceiling prices for old and new houses. The authority to fix such ceilings is essential. With such authority, our veterans

and other prospective home owners would be protected against a skyrocketing of home prices. The country would be protected from the extension of the present inflation in home values which, if allowed to continue, will threaten not only the stabilization program but our opportunities for attaining a sustained high level of home construction.

Long-Range Program Needed

Such measures are necessary stopgaps—but only stopgaps. This emergency action, taken alone, is good—but not enough. The housing shortage did not start with the war or with demobilization; it began years before that and has steadily accumulated. The speed with which the Congress establishes the foundation for a permanent, long-range housing program will determine how effectively we grasp the immense opportunity to achieve our goal of decent housing and to make housing a major instrument of continuing prosperity and full employment in the years ahead. It will determine whether we move forward to a stable and healthy housing enterprise and toward providing a decent home for every American family.

Production is the only fully effective answer. To get the wheels turning, I have appointed an emergency housing expediter. I have approved establishment of priorities designed to assure an ample share of scarce materials to builders of houses for which veterans will have preference. Additional price and wage adjustments will be made where necessary, and other steps will be taken to stimulate greater production of bottleneck items. I recommend consideration of every sound method for expansion in facilities for insurance of privately financed housing by the Federal Housing Administration and resumption of previously authorized low-rent public housing projects suspended during the war.

In order to meet as many demands of the emergency situation as possible, a program of emergency measures is now being formulated for action. These will include steps in addition to those already taken. As quickly as this program can be formulated, announcement will be made.

Last September I also outlined to the Congress the basic principles for the kind of decisive, permanent legislation necessary for a long-range housing program.

These principles place paramount the fact that housing construction and financing for the overwhelming majority of our citizens should be done by private enterprise. They contemplate also that we afford governmental encouragement to privately financed house construction for families of moderate income, through extension of the successful system of insurance of housing investment; that research be undertaken to develop better and cheaper methods of building homes; that communities be assisted in appraising their housing needs; that we commence a program of federal aid, with fair local participation, to stimulate and promote the rebuilding and redevelopment of slums and blighted areas—with maximum use of private capital. It is equally essential that we use public funds to assist families of low income who could not otherwise enjoy adequate housing, and that we quicken our rate of progress in rural housing.

Federal Legislation Needed

Legislation now under consideration by the Congress* provides for a comprehensive attack jointly by private enterprise, state and local authorities, and the federal government. This legislation would make permanent the National Housing Agency and give it authority and funds for much needed technical and economic research. It would provide additional stimulus for privately financed housing construction. This stimulus consists of establishing a new system of yield insurance to encourage large-scale investment in rental housing and broadening the insuring powers of the Federal Housing Administration and the lending powers of the federal savings and loan associations.

Where private industry cannot build, the government must step in to do the job. The bill would encourage expansion in housing available for the lowest income groups by continuing to provide direct subsidies for low-rent housing and rural housing. It would facilitate land assembly for urban redevelopment by loans and contributions to local public agencies where the localities do their share.

Prompt enactment of permanent housing legislation along these lines will not interfere with the emergency action already under way. On the contrary, it would lift us out of a potentially perpetual state of housing emergency. It would offer the best hope and prospect to millions of veterans and other American families that the American system can offer more to them than temporary make-shifts.

I have said before that the people of the United States can be the best housed people in the world. I repeat that assertion, and I welcome the cooperation of the Congress in achieving that goal.

* The Wagner-Ellender-Taft general housing bill (S. 1592).

New Proposals for State Assistance for Local Governments

STATE aid to municipalities of definite sums per capita is a feature of a new local assistance program recommended in a report submitted on January 7 to the governor and legislature of the state of New York by the Commission on Municipal Revenue and Reduction of Real Estate Taxes, under the chairmanship of State Comptroller Frank C. Moore.

In brief, the Commission's comprehensive plan of state assistance to local governments provides:

I. *New State Assistance:*

Per Capita Allocations—To provide revenue for local government from state collected taxes, each city, town, and village shall receive, respectively, $6.75, $3.55 and $3.00 per capita in the fiscal year beginning April 1, 1946, and annually thereafter, with special provisions for distributing the town and village per capita allocation in Nassau and Westchester Counties.

II. *Increased State Aids:*

Home Relief, Old Age Assistance, Aid to Dependent Children and Aid to the Blind Reimbursement — The local share of expenditures on and after January 1, 1946, for these purposes shall be reduced to, and stabilized at, 20 percent of the total expenditures for each type of assistance. The state shall assume the difference between 80 percent of the cost of such services and the federal contribution therefor.

Snow Removal Aid—The state shall assume the entire cost of snow removal from state highways.

Education Aid—State aid for education increased in amount as a result of the revision of the Friedsam Formula by the legislature upon the recommendation of Governor Dewey's Advisory Committee, should be continued as a assistance to local government.

The report also recommends continuance of the present state highway aids for counties and towns, and for assistance to local governments in maintaining and enlarging public health services.

The report points out that the proposed recasting of the system of shared taxes and state aids and the creation of an entirely new method of distribution would make necessary the elimination of certain existing provisions for the distribution of portions of special taxes to school districts and municipalities.

Charlotte's attractive water plant is gradually outgrowing even its 1939 improvement. The demand for water, officials believe, will remain high during the post-war period

Charlotte's Water Demand Stays Up

Charlotte, N. C., by virtue of a 1939 improvement program, successfully met a heavy unanticipated wartime water load that pushed its plant to capacity. Evidence indicates that this load will increase

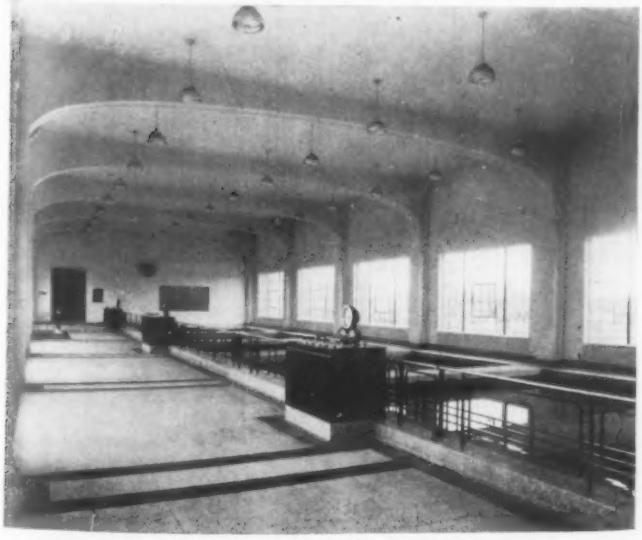
AFTER six years of operation, Charlotte's water treating plant is again beginning to reach into the upper limits of its designed capacity. The flow through it during recent months has been averaging 12 mgd with occasional peaks of 15.75 mgd during the summer months. The pre-war water improvement program, City Manager Robert W. Flack states, was fortunately timed as far as the war emergency was concerned, since it enabled the city to get through the war years with a minimum of water supply difficulty. The estimated post-war demand, he feels, will increase the consumption figure beyond the plant's designed capacity which makes it imperative that the plant capacity be increased at an early date.

The plant was built in 1924 with subsequent enlargements in 1939 giving it the 16.5 mgd capacity. The plant receives its water through a 24-inch and a 30-inch main which combine into a 36-inch line drawing from an impounded supply on the Catawba River. The water receives treatment by the addition of lime and alum for coagulation, plus aeration through carborundum diffuser plates and the application of activated carbon for taste and odor control. A Dorr Flocculator insures close contact of the chemicals with the water.

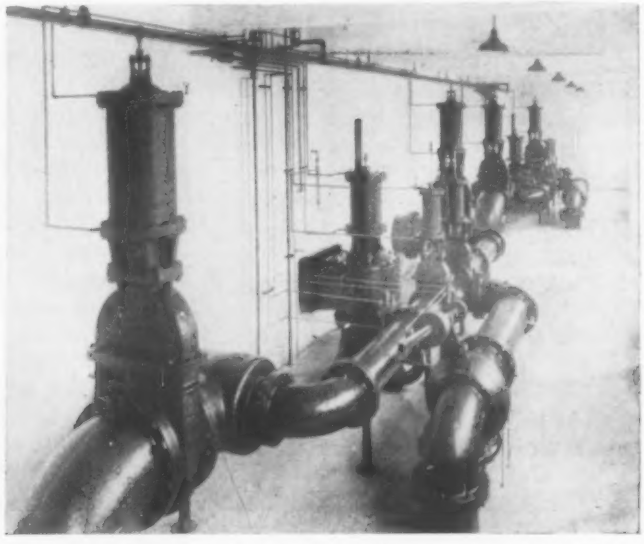
Settling basins retain the water for a 4-hour period during which the floc precipitates out as sludge.

The settled effluent then proceeds to the Simplex controlled rapid sand filters. Chapman hydraulic gate valves regulate the flow of water from the filters as well as the backwashing operation. The treated water then is pumped to the distribution system which is strengthened by four overhead storage tanks giving 3-mg reserve.

The water department is managed by W. E. Vest, Water Superintendent. J. L. Greenlee is Assistant Superintendent. The 1939 improvement was designed by George S. Rawlins, now associated with J. N. Pease and Co., consulting engineers of Charlotte, N. C.



Notice the attractive rigid frame design used in the filter room



Chapman hydraulically operated valves control the operation of the filters located on the floor above

Putting Logic into Airport Accounting

An intelligent analysis of airport revenues and expenses will go far in giving a true economic picture of this important municipal function

IN ORDER to discover whether an airport pays its way or not, or to learn what phase of the airport operation incurs the greatest expense, you need a sound accounting system. Here is one developed by Joseph M. Cunningham, First Deputy Comptroller of the City of New York. Forming part of recommendations made by Mr. Cunningham to the Municipal Finance Officers Association, it is designed for use by airports generally and is not limited to large ports.

In developing this system, Mr. Cunningham laid principal emphasis on an accurate determination of profits and losses. His study of revenues disclosed these main groups of accounts:

- Aviation revenues
- Concessions revenues
- Revenues from airport management sales and services
- Miscellaneous revenues

Revenues

Aviation revenues represent receipts from flying activities and flying base installations, Mr. Cunningham pointed out, and may further be grouped as follows:

- Hangar rental
- Scheduled flight fees
- Non-scheduled flight fees — airline companies
- Non-scheduled flight fees — governmental agencies
- Non-scheduled flight fees — local flying
- Non-scheduled flight fees—other
- Other aviation revenues
- Terminal building rentals

Concession revenues cover all features of airport operation other than flying that the airport owners may lease out. These Mr. Cunningham summarizes as follows:

- Airport services
- Sale of petroleum products
- Land transportation facilities
- Terminal services
- Terminal sales

Mr. Cunningham defines *revenues from airport management sales and services* as those gross receipts from operations that the airport decides to operate itself intsead of leasing to concessionaires and includes these groups: airport services, fees, sales.

In the case of the extremely large airport, operations may justify breaking down the classifications even further. For example, hangar rentals may be subdivided into revenues from airline companies, governmental agencies, covered storage fees, and other hangar revenues.

Expenses

Similarly, expenses can be classified and charged against the functions performed. These functions may be grouped as follows:

- Maintenance and repair of field area
- Maintenance and repair of hangars
- Maintenance and repair of lighting and communications
- Maintenance and repair of seaplane walls, floats, and channels
- Maintenance and repair of public areas (roads, walks, parks, parking areas)
- Maintenance and repair of terminal buildings
- Maintenance and repair of service equipment
- Cost of management sales and service
- General and administrative expenses

Mr. Cunningham recommends that each of these functions be accounted for by the objects of expenditures, classified briefly as follows for the smaller airport: personal services, supplies and materials, contractual services, other.

Balance sheet accounting, Mr. Cunningham points out, follows practices customarily used in corporate accounting and only the classification of Fixed Assets requires special attention: land, landplane port, seaplane port, utilities, buildings, equipment—airport, equipment—management sales and services.

The recommendation is further made that aid received from governmental sources for airport construction should be credited to a "Governmental Grants" account and shown on the liability side of the balance sheet with the Capital Accounts.

Certain general principles should guide the municipal official when balancing airport accounts. These recommendations may be summarized as follows:

- The accounts should be operated on an accrual basis.
- The chief finance officer should keep the accounts, locating them if possible at the airport where they would be available to the airport manager.
- The appropriation accounts usually maintained by local governments should not be kept. Comparison with budget appropriations can be made on a statement basis.
- Services received by the airport from other city departments should be paid for; local taxes on a reasonable basis should be charged to the airport and the airport should charge other city agencies for the use of facilities.
- Depreciation should be included as an expense but amortization of bond issued should be omitted.
- Accounts for the acquisition and disposition of fixed assets should be maintained.
- No surplus adjustments should be made, as all items affecting profit and loss should be included in the revenue and expense accounts.
- If a separate fund for the airport is established, the profit for the year should be transferred to the general fund of the local government; and the loss should be reimbursed by the general fund.

Twenty-Five Cities Report to CAA on Airport Plans

TWENTY-FIVE American communities have completed or soon will complete their master airport plans, according to Edgar Smith, Director of the Airport Plans of the Civil Aeronautics Administration.

Metropolitan and regional airport studies which have been completed or are nearing completion are: Boston, Providence, New York, Philadelphia, Rochester, Syracuse, Atlanta, Birmingham, Miami, Nashville, Chicago, Cleveland, Detroit, Indianapolis, Minneapolis-St. Paul, St. Louis, Dallas, Fort Worth, Houston, Omaha, Los Angeles, Seattle, Milwaukee, and Newport News.

These plans are not for the central cities alone; they include in each case, the contiguous metropolitan area. Boston's plan, for instance, covers six counties and one hundred towns; the New York plan deals with 22 counties in which live 10 percent of the population of the United States; Washington's plan takes in not only the District of Columbia, but five adjoining counties in Maryland and Virginia.

Ducks Invited

By E. A. HOWARD
Supervising Engineer
Milwaukee County Regional
Planning Department

Bird lovers enjoy feeding the ducks in open water in the lagoon in Juneau Park, a Milwaukee County park on the shore of Lake Michigan, even when the temperature is below zero. The faint parallel lines that can be discerned in the water in the picture above are caused by air bubbling from a perforated compressed air grid laid close to the bottom of the lagoon. This keeps the water from freezing. The grill was fabricated of iron pipe with screw fittings throughout and was erected on the temporary scaffold shown at the left and then lowered into place. It was found necessary to have the grill level to attain even distribution of air

FOR years migratory fowl have been stopping in Milwaukee at a lagoon in Juneau Park, located along Lake Michigan. The lagoon is 100 to 300 feet inland from the lake shore and almost immediately adjacent to Lincoln Memorial Drive. Food has been scattered daily on the bank and on the water in summer, and on the ice in winter by people who enjoy feeding the ducks. Until a year ago when the lagoon froze the birds sought refuge in the open water out in the lake, but returned to the frozen lagoon almost every afternoon to obtain food.

In 1944 Mr. Herman Falk, Chairman of the Board of Directors of the Allis Chalmers Manufacturing Company, who is very much interested in wild life and conservation, offered to finance the cost of equipment to keep a small portion of the lagoon free from ice during the winter. Mr. Falk's offer was accepted by the Milwaukee County Park Commission. The equipment was designed by Charles Martin, Hydraulic Engineer for the Allis Chalmers Company. This company had used similar equipment for years past in keeping intakes free from ice in connection with their hydro-electric installations and equipment.

A Winter's Test

The winter of 1944-45 proved to be severe enough to give the equipment a good test. The size of open water varied from 5,000 to 15,000 square feet, depending upon the temperature. Ice attained a thickness of several inches within 25 feet of the open area. Though the lowest temperature experienced during that winter was below zero, the equipment has not yet been subjected to a period of several days of 20° below zero, as occasionally occurs in Milwaukee. It has, however, worked successfully through a cold spell of several days during December of 1945, with temperatures ranging to 12° below zero.

Works on the Air-Lift Pump Principle

The principle of operation is similar to that of the air-lift pump. Pipes with perforated holes of small diameter are located slightly above the bottom of the lagoon so as to be above the mud. Air supplied to these pipes escapes through the small perforations and carries the warmer water from the bottom of the lagoon to the surface, thus setting up a current which provides a supply of surface water always above freezing temperature and prevents the formation of ice.

Although the basic idea is simple, the design and installation required the solution of many problems peculiar to a project of this nature. The final plan provided for a grill consisting of seven rows of ¾-inch pipe, each row 84 feet in length, spaced 5 feet on centers. The pipe in each row was drilled with 1/32-inch diameter holes spaced 1 foot on centers. Pipe is laid with the holes in a horizontal position, rather than vertical to prevent dirt from settling into the small openings.

At each end of the pipe is a ¾-inch diameter pipe header and in the center of the grill there is a 2-inch center header, through which air is supplied to the ¾-inch lines. A 2-inch supply line feeds air to the middle of the center header. This 2-inch line extends under the water to the shore and is carried in a trench from the shore to the compressor.

The equipment for furnishing the air consists of an air compressor capable of delivering 15.5 cubic feet of air per minute at 5 pounds pressure driven by a 1 hp electric motor. The cost of electrical energy is estimated at about thirty cents per day of operation, and the cost per season should not exceed $50.

Insulated Housing

All of the operating equipment is housed in an insulated wooden box which has two 500-watt space heaters in it so that in very cold weather air entering the box through a pipe inlet can be warmed before being compressed and sent to the pipe grill under the water. Automatic switches, thermally controlled, start the compressor at 32° and turn on the space heaters at 10° outside temperature.

The ¾-inch pipe grill is located in water approximately 6 feet deep, and is supported about 6 inches above the bottom on pipe supports that were placed prior to the installation of the grill.

Many ducks visited the area throughout the winter. Thousands of people traveling along Lincoln Memorial Drive stopped to witness the unusual sight of ducks enjoying open water in the northern winter season.

The field installation was made under the direction of J. W. Gibb, Assistant Engineer, Milwaukee Regional Planning Department, which department provides the technical staff for the Milwaukee County Park Commission.

Old cottage and dining porch of the 6th Naval Battalion (left) before alteration into Village Hall (center). The sports locker house on the children's playground (right) was formerly the comfort building

Lake Success Modernizes

Village of 700 Population Acquires Civic Center and Operates Volunteer Police Emergency Squad

TWO outstanding events took place in the Incorporated Village of Lake Success, N. Y., within the last eighteen months. The village acquired through purchase, by means of a small bond issue, a new civic center which, after alterations, consists of a village hall and buildings for civic affairs, as well as park and athletic facilities for baseball, track, tennis, handball, and swimming.

As if this were not enough to put the tiny village on the map, a year ago the "Lake Successians" organized a volunteer police emergency squad, bought a truck, equipped it, rolled promptly on the call of the siren to eighteen scenes of emergency, and already have the record of helping to save the lives of two of its inhabitants.

To those who never heard of Lake Success, let it be noted that it is located on the Long Island outskirts of New York, next to Queens Borough, and on the fringe of the other eight villages which, clustered together, go by the general name of Great Neck, L. I. It is one of 13,288 incorporated villages in this country of less than 2,500 population. According to Mayor William C. Latchford, it has 472 adults, who came mostly from the surrounding New York City area, and 222 children. The village has an assessed valuation of about ten million dollars and a municipal budget of approximately $51,000.

Village Center

The Mayor, who was primarily responsible for engineering the acquisition of the property which now is the Village Center, states that the ten acres cost $22,500 to purchase, and that a $60,000 bond issue paid for the property and about $35,000 of improvements and alterations, which transformed the former 6th Battalion U. S. Naval Reserve property, consisting of cottages, barracks, and dance and mess halls with athletic fields, into a very beautiful and serviceable group of facilities.

The village hall section provides for the police station and garage, a first aid and trustees' meeting room, and a handsome court room in the Williamsburg Restoration style. In fact, the colonial style was adopted throughout.

An adjoining building has been turned into an auditorium 25 feet x 80 feet suitable for gatherings of 250 people. Another former bunk and barracks building has been named Exhibit Hall and contains a lobby, cloak rooms, kitchen, pantry, men's and women's toilets, a large exhibition room, and several smaller committee meeting rooms. Other facilities include a locker house for baseball and tennis players, a swimming pool and a children's playground, fully equipped, next to a shady picnic area.

The maintenance, interest, bond amortization and full operating expenses cost approximate $1.65 per $1,000 of assessed value, or as the Mayor says, a householder gets the annual benefit of the whole property for the cost of one good day's family outing.

Emergency police using E & J resuscitator and inhalator with nasal applicator and portable "oxygen tent"

Police Emergency Squad

About twenty enthusiastic villagers volunteered about a year ago to organize a village police emergency squad. It was the outgrowth of the OCD and the war was still on—V-bombs were expected at any time. But upon cessation of the war, the work went right on more enthusiastically than ever, especially after the 1944 hurricane crippled so many services of the village.

The village maintains its own police department, consisting of a lieutenant and six men. The department operates three patrol cars equipped with two-way Link radios, with calls emanating from County Police Headquarters in Mineola, a Harley-Davidson motorcycle, and the emergency truck.

The squad has three lieutenants under Captain Arthur DeBevoise, a construction contractor, and operates under the police department which is supervised by the Commissioner of Police. The squad numbers among its membership engineers, contractors, salesmen, manufacturers, flight engineers, men in various positions in many lines of business, and also a doctor.

The emergency truck, designed and equipped by the squad, has over 125 items of equipment which include in addition to first aid kit, stretchers, blankets and wrecking tools, jacks, ropes, ladders, oxy-acetylene cutting outfit, and a generator operating four 500 to 1,000-watt G.E. and Crouse-Hinds floodlights. The truck is equipped to administer oxygen with an E & J inhalator and resuscitator and a portable equivalent of an oxygen tent.

AT RIGHT: *Lake Success emergency truck manned for a run*

AT LEFT: *The use of asbestos suits to permit close approach to fire*

BELOW: *A boat for life saving on the village's three lakes*

The Captain reports that since inauguration in May of 1945, the squad has answered eighteen emergency calls, and doctors have attested that the promptness of response and the using of proper equipment have helped save the lives of two inhabitants of Lake Success. These calls were as follows:

5 emergency calls were for fires within the village limits, at which time the squad performed police functions, and gave other aid it could give to the Manhasset-Lakeville Fire Department.

6 automobile accidents, at which the squad gave first aid to 8 people, directed traffic, and removed obstructions from the highway.

2 calls to remove obstructions on village resident's property; one call being to remove a retaining wall that fell down during a storm.

2 emergencies in the homes of village residents. In each case the squad was able to help save lives.

2 calls for the removal of fallen trees on the public highway.

1 call at the lake which required first aid for a swimmer victim.

Most municipal emergency crews are under fire department auspices. Lake Success has to be different, for the village has no fire department of its own, relying on the efficient Lakeville-Manhasset Volunteer Fire Department for fire protection, but "Lake Successians" do about everything else for their own protection. Lake Success, being on main lines of traffic, expects that with the increase in the use of automobiles, there might be an increased number of accidents. The village is prepared.

Snowfall Facts

SNOW falls, as a rule, during some months of the year in 47 states.

Colorado tops every other state with its white blanket of 76.4 inches. Such far-western states as Wyoming (67.5), Idaho (59.6), Montana (53.0) and Utah (51.0), are matched in the northeast by New York (68.0) and New England (53.9); and by Michigan (56.2) in the Great Lakes area. Measurements in the forties are usually attained by Wisconsin (45.9), Washington (44.9), and Pennsylvania (42.0). States scoring thirty inches or more are Minnesota (39.6), Nevada (37.9), Oregon (36.0), South Dakota (34.9), West Virginia (33.3) and North Dakota (30.9).

In the twenties are such far-apart states as Iowa (29.7), New Jersey (29.1), Nebraska (29.0), Ohio (28.1), New Mexico (26.7), Maryland-Delaware (25.6), Indiana (23.2), and Illinois (21.5).

Registrations in the 'teens prevail in Missouri (17..8), Virginia (17.1), Kansas (16.7), Kentucky (13.6), and Arizona (11.8). Nine inches or less is the rule in Tennessee (9.7), North Carolina (8.9), Oklahoma (8.7), Arkansas (5.3), South Carolina (2.4), Texas (2.3), Mississippi (2.1), and Georgia-Alabama (1.4). The lowest snowfall of all, nine-tenths of an inch, prevails in Louisiana.

One important state not listed is California. The omission from the official compilation sheet is explained as "average not determinable."

ERNEST A. DENCH
Ho-Ho-Kus, N. J.

Cleaning Newark's Catchbasins

Before starting, the crew is told which catchbasins to clean. In this case the instructions come from W. S. Baver, Acting Chief Engineer in charge of Newark's Division of Sewers

NEWARK, N. J., has 7,347 catchbasins that demand attention and the cleaning program goes on continuously. The work, under the supervision of W. S. Baver, Acting Chief Engineer in charge of the Division of Sewers in the Department of Public Works, requires the use of two types of equipment. One, an Elgin Eductor; the other a small crane with an orange-peel bucket. Newark has two of each of these cleaning units, with which the 7,347 catchbasins are cleaned twice a year.

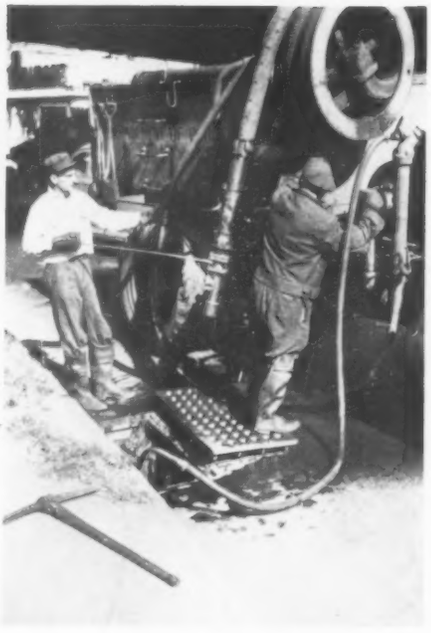
Operating Characteristics

Both pieces of equipment have their advantages, Engineer Baver points out. The Eductor is clean and easy to operate. It works quickly and does not require anyone's getting inside the catchbasin.

Engineer Baver does not like to use the Eductor to clean deep basins because of the difficulty that arises in raising and lowering the suction nozzle and the added power required to pump the water for long distances. And although the machine is efficient in cleaning dirt and silt it will not remove large pieces of debris such as old bottles and tin cans which must be removed manually; also, the entire unit must go to the dumping area when it discharges the accumulated dirt from a set of catchbasins.

This latter disadvantage is neutralized to some extent by limiting the operation of the Eductor unit to areas fairly close to dumping points. It could be neutralized still further, Mr. Baver points out, if the machine were to discharge into an auxiliary truck which would go directly to the dumping point. So far, he has not found it necessary to use auxiliaries of this kind.

The orange peel type of cleaning ap-



LEFT CENTER: *The first step is to remove the grating.*

RIGHT CENTER: *Next the crew puts the Eductor suction nozzle into the catchbasin well.*

LOWER LEFT: *When the nozzle is in place the operator starts the auxiliary motor that circulates the water from the supply tank to the suction nozzle. This action siphons the dirt out of the catchbasins. A small hose (at the right in this picture) contains an auxiliary jet of water that loosens the dirt in the catchbasin.*

LOWER RIGHT: *This is a close-up of the Eductor suction pipe in operation. The vertical hose carries the water from the supply tank and the hose at the left withdraws the water to the discharge tank*

paratus is, he finds, more flexible in operation. The small crane can be manipulated easily into position for the orange peel bucket to lift the catchbasin grating, and the bucket can be dropped for all practical purposes to any depth required. Some Newark catchbasin wells are forty feet deep. Moreover, the orange peel can keep a number of trucks busy loading, while others are dumping.

How the Eductor Works

The Eductor is a big unit mounted on a five-ton Mack truck, which carries a large tank and a motor-driven pump connected to a siphoning unit carried by the truck on a reel. The motor pumps water from the tank through the siphon and back into the tank. As the water makes its circuit, it draws the dirt from the catchbasin with it. The motor continues to circulate the water until it becomes so heavy with silt that it is no longer effective. The machine can clean an average of three catchbasins per hour.

One of Newark's two orange peel type of catchbasin cleaners utilizes a Healy bucket and the other uses a Hayward bucket; one is mounted on a Dodge 1½-ton truck, and the other is powered by a small International tractor.

Engineer Baver attempts to concentrate the cleaning program in the spring and the fall. However, with the large number of catchbasins to be cleaned and the relatively limited amount of equipment at hand, he is forced to use the Eductor and the orange peel buckets continuously.

Where the traffic and rainfall runoff is particularly heavy, some of the catchbasins require cleaning more than twice a year. These are kept under close observation by the public works crews in order to avoid any difficulty during heavy rains.

The work is conducted by the Department of Public Works of Newark, under the supervision of Director Meyer Ellenstein and Chief Engineer L. Dudley Coles.

TOP LEFT: *Engineer Baver takes a hand with the operation.*

TOP CENTER: *When the catchbasin is clean the operator shuts off the motor and withdraws the suction pipe.*

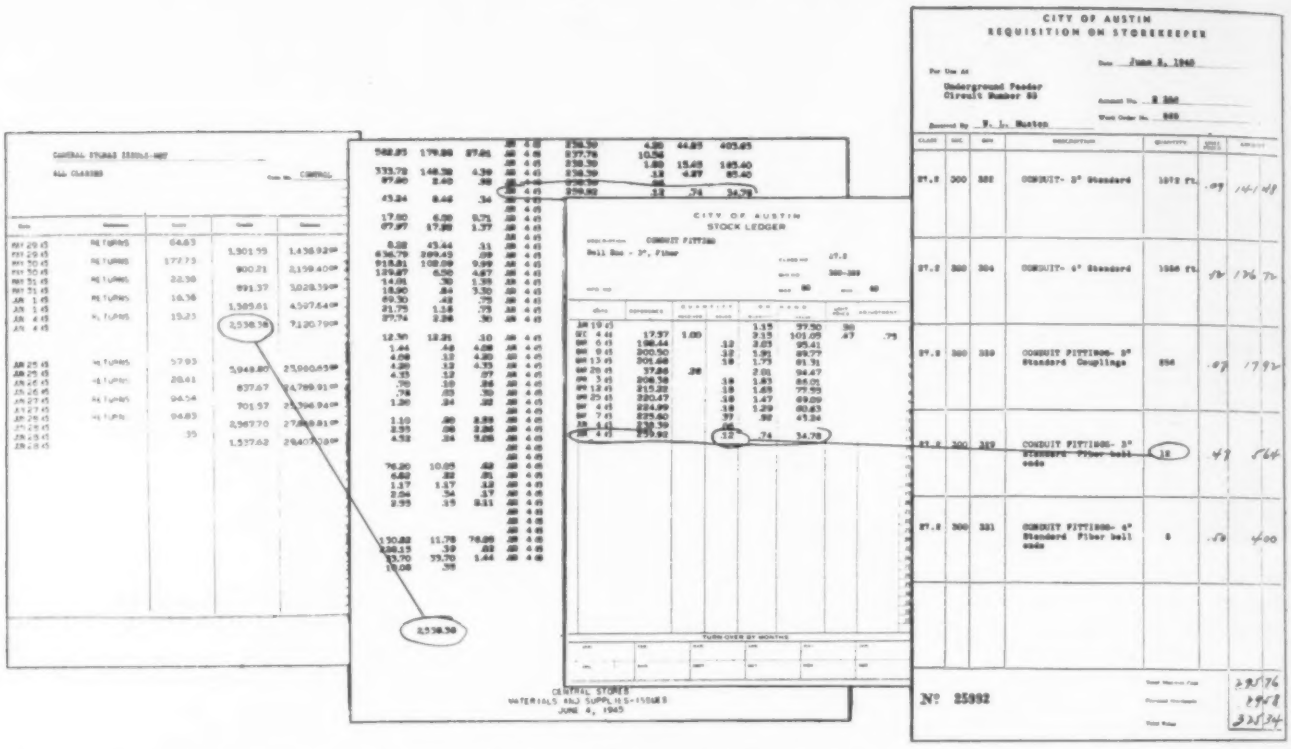
TOP RIGHT: *The grating is now replaced and the truck and its crew are ready to proceed to the next catchbasin.*

CENTER LEFT: *An orange peel type of bucket is used in Newark for deep catchbasins where the siphon does not work well, and in sections where there are no convenient dumping points. The bucket can be used to lift the grating out of place.*

CENTER RIGHT: *Then it is a simple matter to dip down and bring up the refuse from the catchbasin.*

LOWER RIGHT: *The cleaning mechanism does not have to go to the dumping areas; the bucket can keep a number of trucks busy. However, the work is a little more messy for the bucket does drip, and a man must go into the well to do the final cleaning*

Stores Control by Centralized Records



These are the principal forms used to account for materials in the central storeroom in Austin. They are the Central Stores Control of all material issued at the left; next to it is the Journal of all individual materials and supplies issued and posted to the stock ledger accounts on a particular day (in this case June 4, 1945); resting on the Journal is a Stock Ledger of an individual class of materials (in this case conduit fittings); at the right is the Requisition on the storekeeper, written from a work order

By WALTER E. SEAHOLM
Director of Public Utilities
Formerly Acting City Manager
Austin, Texas

THE various departments of the city of Austin, Texas, requisition materials on the purchasing division as outlined in the November 1945 issue of THE AMERICAN CITY.

When the materials are received at the Central Storeroom a receiving sheet is prepared in triplicate, setting out class, section and bin, quantity received, and description. The original copy of this receiving sheet is forwarded to the purchasing office, the duplicate remains at the Central Stores office, and the triplicate is forwarded to the material and supplies stock clerk in the Finance Office where the items are recorded in a purchase register pending receipt of priced invoice. Upon receipt of vendor's invoice and purchase order copies, the amount is entered in the purchase register, on a stock ledger card.

The authorization for the withdrawal of materials from the storeroom is an approved work order or a memorandum order from which the requisition on storekeeper is prepared in quadruplicate. The fourth copy is retained at the storeroom and the others forwarded to the stock clerk in the Finance Office. These three copies are priced using the current average price shown on stock card shown here. The third copy is then detached and assorted for posting and a tape is prepared by classes of materials. This tape is to be used as a posting medium to material class control cards on a Burroughs Company accounting machine. The tickets are then posted to the stock ledger card by picking up the old quantity recording the issue on each ticket, sub-totaling for a new quantity balance, multiplying by the unit price on the stock ledger card, extending the new value, subtracting the previous value and totaling for the issued value, in this manner obtaining a proof of the pricing and extensions on the requisition. As a by-product of this operation, a proof journal tape is shown at this point from which the previous quantity and issued quantity are verified. This method of proving quantites has proved so accurate that we have made only two quantity adjustments since the record was installed in June 1943.

Fourth in a series of articles on the use of business machines in Austin, Texas. See also "Assessing, Collecting, and Accounting," page 109, October, "Adoption of an Accounts Payable Fund," page 109 November, and "Centralized Payroll Equipment Writes Three Records in One Operation," page 92, December 1945.

Service Center for Veterans in St. Louis

TO MINIMIZE "G.I. Joe's" post-war confusion, St. Louis has organized a "one-stop" service center where in one building veterans can consult with more than a dozen agencies specializing in their problems and interests, the American Municipal Association reports.

Nearly one thousand veterans a day are now receiving service in the center. About 100 workers representing public and private agencies are providing the service at present. The center, which opened in December, is already providing a rallying point for the majority of individuals and groups wanting to do a job for veterans.

Services which are outgrowths of the center include a survey of job opportunities for returned veterans. The survey will be conducted by volunteers working with the United States Employment Service. More than fifty patriotic and civic organizations have agreed to furnish volunteers to help conduct the survey.

To Make Our Big Cities Friendly Groups of Well-Planned Neighborhoods

Chicago Develops Ideas Worth Emulating

THE pride and energy which have built a big and friendly city may now make possible the redevelopment of Chicago into an even more friendly city, made up of attractive, modern "small towns" which will combine the economic, social, and cultural advantages of the large metropolis with most of the desirable features of quiet, small-city life.

That is the prediction of A. H. Mellinger, Chairman of the Chicago Plan Commission, who has announced that the Commission has completed preliminary studies which indicate that, when the major phases of the Comprehensive City Plan have been realized, Chicago will be made up of 59 well-defined and integrated communities.

"The Commission's plans for making Chicago a better place in which to live and work [he said] are focused on the local areas in which people live—their neighborhoods and their communities. The city plan recognizes these as the basic units of a city, just as the family is the basic unit of society. Accordingly, the studies of the Commission suggest an arrangement of residential areas which will ultimately provide families in every part of the city with facilities for pleasant, friendly community life comparable to that of the better suburbs. The units are small enough to cause people to have a feeling of pride in their community and to take a more active part in the neighborhood and community affairs.

Expressways, Waterways, Parks, and Schools

"The communities of this future city will ultimately range in population from 45,000 to 90,000, with an average of approximately 55,000. They will be separated from each other by a great system of expressways, by a fixed railroad and industrial pattern, by waterways, and wherever feasible by open areas commonly known as buffer parks, which can be used for various recreational purposes. It is contended that each community should ultimately be the service area for a high school and a community park and play field. To this end the Commission has made known the close cooperation it has received from the Board of Education, whose officials have evidenced a willingness to have the future school district pattern conform to the planned community areas.

"The 59 communities are further divided into 128 sub-communities for the purpose of distributing park and playfield areas to accommodate more adequately the recreational desires of all age groups. These recreational facilities are planned at convenient locations with a service range governed by reasonable walking distances from the homes of all families within the sub-communities. In this phase of its planning program the Commission commends highly the assistance and aid it has received from the officials of the Chicago Park District, who have evidenced their approval of the community divisions by proposing to acquire new community park and playfield space in accordance with the Plan Commission's proposals wherever it is physically and economically possible at this time.

"Each of the communities embraces from four to twelve neighborhoods, and these, in total, aggregate 559 throughout the city. The neighborhoods are typically one-quarter square mile in area in the more intensely occupied sections of the city, and somewhat larger in the less populous districts.

"The typical neighborhood would be served by an elementary school located near the center and serving the population of 4,000 to 12,000 and would be virtually a self-contained unit providing stores and other facilities necessary for every-day activities, with the exception of employment."

By reason of these sharply defined physical boundaries and the facilities within them, Mr. Mellinger pointed out, each neighborhood would take on an individual identity and character and, together with several contiguous neighborhoods, would make up the community which corresponds to a medium-sized town or small city. Each of these communities is planned to provide the more extensive facilities such as churches, parochial schools, theaters, shopping centers, hospital and health services, and other public welfare services.

Vacant Land and Blighted Areas

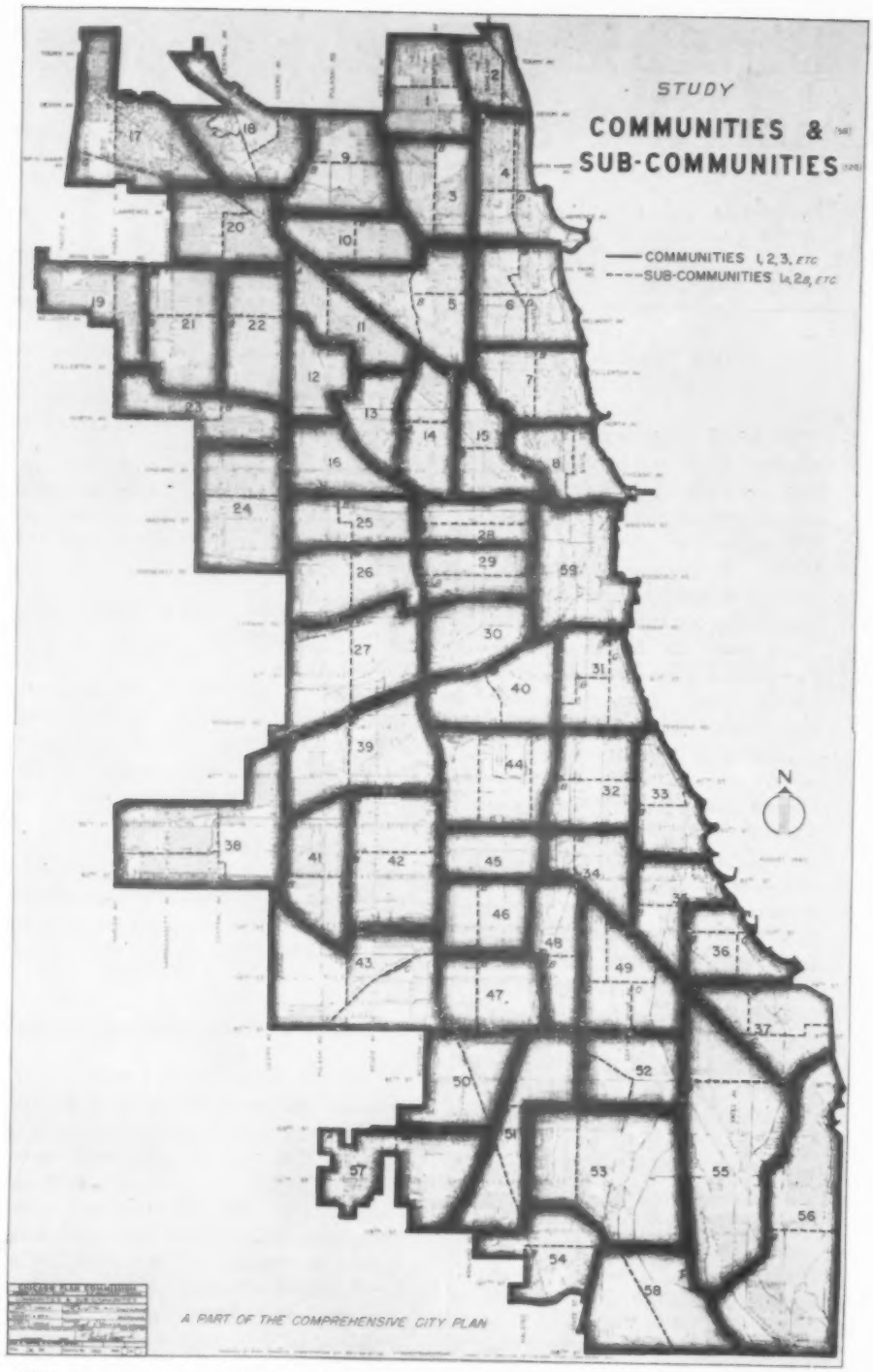
The Plan Commission Chairman emphasized the need for good design and careful control of new development which will occur in large quantities on the now vacant lands remaining within the city. He said that the same principles of modern city planning should be applied in the rebuilding of the blighted areas and that the public and private efforts devoted to the building of new homes must conform to good standards of design to assure better utility of the land and more attractiveness in the appearance of the completed new neighborhoods. The streets upon which people live should be laid out to discourage fast-moving traffic through neighborhood areas. He made it clear that the real purpose of the expansive network of expressways is to take fast, through-moving traffic off the local street system. Consequently the residential areas will become quieter and safer places in which to live. One of the greatest objections to big-city living is the traffic hazards to small children. This factor was predominant in the considerations of the Commission in the preparation of its plan of neighborhood and com-

AN IDEA WHOSE TIME HAS COME

Over 16 years ago—in September 1929— The American City *carried an article by the late Clarence Arthur Perry on "Planning a Neighborhood Unit." In this article, and in greater detail in Monograph 1 of the Regional Survey of New York and Its Environs, Mr. Perry then pioneered in developing and presenting the Neighborhood Unit concept.*

Although the theories back of this concept met with widespread acceptance among city planners, the practical difficulties of rebuilding substandard urban areas then seemed insurmountable. Realization of the fact that only through large-scale redevelopment can the decaying sections of our cities be salvaged has now brought Neighborhood Unit planning into the realm both of the urgent and of the attainable.

Philosophers have emphasized the great power of an idea "whose time has come." The accompanying article and similar studies under way in other cities point to the Neighborhood Unit as such an idea.



This map shows the 59 communities which the Chicago Plan Commission believes will make up the city when the major phases of the Comprehensive City Plan have been realized

munity areas and in the location of frequented spots, such as schools, recreational areas, shopping centers, and other commonly used facilities. Thus, said Mr. Mellinger:

"All advantages of the large metropolis would be retained in the coordinated, planned city. The central business district, for example, will remain as the central retail area and amusement district, and it would be there that many of the activities of the entire metropolitan area and great midwest territory will be focused. The city's many cultural institutions, its schools of higher learning, its museums, libraries, and the like, would continue to serve the entire Chicago area and its many visitors. The county's forest preserves, together with the city's large parks, boulevards, and improved transportation facilities would be no less accessible to all of the "big-city—small-town" dwellers. There would, of course, continue to be a single municipal government to supply uniform public services."

Describing the various elements of the plan and the tremendous benefits which the people will realize from the completed improvements, Mr. Mellinger continued to emphasize that the local areas are the starting point and foundation of a well planned city:

"From each neighborhood and community must come the teamwork of the people with the public officials in making possible these plans for a more modern, more comfortable, and more efficient Chicago. The Commission expects, within a very short time, to present officially these detailed plans to the City Council as a supplement to the various reports on major phases of the physical and economic life of the city."

During the coming year, Mr. Mellinger believes that the Commission can complete the major phases of the plan in order that Chicago will have a comprehensive city plan framework within which to develop its many public works and the housing of its people in an orderly and progressive manner.

American Society of Civil Engineers Names New Officers

ENGINEERS prominent in municipal activities will hold important positions in the American Society of Civil Engineers for the coming year. At its recent meeting in New York, the society elected as President W. W. Horner of the consulting firm of Horner and Shifrin, St. Louis, Mo., with an active municipal practice in the sanitation field. Mr. Horner is a past president of the American Society of Municipal Engineers.

W. W. Horner

Among the directors is Shortridge Hardesty whose firm, Hardesty and Hanover, New York City, is now engaged in the design of important interurban highways such as the Cross-Bronx Highway and the Van Wyck Expressway in New York City.

Irving V. A. Huie, also selected as a director, is at present commissioner of New York City's Board of Water Supply. During the war Mr. Huie was a member of the Mayor's War Cabinet; he organized and commanded the Public Works Emergency Division.

Among the awards made by the society was one to Donald N. Becker, Engineer of Bridge Design, Chicago Department of Public Works, for a paper entitled, "Development of the Chicago-Type Bascule Bridge"; and to Thomas R. Camp, consulting sanitary engineer of Boston, for a paper entitled "Effect of Turbulence on Sedimentation."

How Should Assessment Be Related to Present Real Estate Prices?

During the depression years reduction of realty assessments generally lagged behind declining sales prices. To what extent ought this trend now be reversed as prices rise?

By ALBERT W. NOONAN
Executive Director
National Association of Assessing Officers

Members of the Advisory Council of the National Association of Assessing Officers, at a recent meeting in Chicago, agreed that:

There has been a substantial general increase in real estate values during the war period;

Such increase varies materially among the different states of the nation, among different sections of any particular state, and among classes of property within a particular assessment jurisdiction;

In general the type of property where increases have been greatest have been in residential units, especially among medium and low-priced groups;

In most recent sales of small residential properties there usually has been included an amount that might be called "premium for immediate occupancy," or "bonus for shelter," which should not be considered as a reflection of the value of the property;

Increases in value which may be traced to increases in the cost of labor or material are likely to remain, as there are no prospects that labor or material costs will decline in the near future;

Assessing officers who believe that assessments in their jurisdiction should be increased should not exceed as an upper limit the reproduction cost new, even where this is substantially below the price at which the property recently sold.

The accompanying article accepts the first three of these points as non-controversial, and discusses the last three.

THE elements of the controversy in point No. 4 of the accompanying statement will be quickly appreciated by every assessing officer. For example, let us suppose a house has a construction cost new, less depreciation, of $4,000, is located on a lot with a generally agreed value of $500, thus indicating a fair value of about $4,500. If materials could be secured at ceiling prices, the house could be reproduced for that sum. But in the meantime, some family, desperately in need of housing accommodations, agrees to pay $7,000 for the house and lot, provided it can occupy the house immediately.

The sales price is $7,000, but the statement of the Advisory Council urges that no more than $4,500 of the $7,000 can be used as the measure of value, the balance of $2,500 being a sum which is paid not for property but for a certain type of accommodation or service—in short, the immediate privilege of moving in.

Is this sound economic doctrine? It could well be argued that it is not. But, whether it is good or bad economic doctrine, there is a lot of administrative common sense in it, and I think a good sprinkling of humaneness, too.

Nevertheless, it perhaps is well to consider the adverse economic arguments, if for no other reason than to know what they are.

Determining Market Value

For assessment and taxation purposes, the statutory standard in every state is "market value." Sometimes the noun "value" is modified by other adjectives, such as "fair, true, cash, and actual," and compound adjectives such as "fair cash, actual cash," etc., but all of these adjectives, whether simple or compound, reduce themselves on analyses to the equivalent of "market." Although the courts in every state have at one time or another given a judicial interpretation of the meaning of the word "value," practically all could be summed up as the so-called "willing seller, willing buyer" theory. And this has been described innumerable times as *the price a person, willing to sell but who does not have to sell, will accept, and a person who is willing to buy, but who does not have to buy, will pay.* This definition provides the judiciary with a fairly good instrument for settling disputes, but it is of little use to the practicing assessing officer. Why? Simply because the above definition is based on ideal conditions, whereas the assessor deals with real situations. In my humble judgment, the best definition of market value which we have is that of the National Association of Assessing Officers' Committee on Assessment Terminology, as follows:

"The amount of money, or money's worth for which goods or services may be exchanged within a reasonable period of time under conditions in which both parties to the exchange are able, willing, and reasonably well informed."

This is what might be termed a realistic adaptation of the "willing buyer-willing seller" concept. To use a slang expression, it means the amount of money which changes hands when both parties "know the score."

How does this square with the recommendation of the Advisory Council that part of the purchase price of many recent sales of homes be considered as something apart from the market value? After all, both parties may be well informed, they may have all their faculties, including the necessary amount of cash. The seller does not have to sell, and, legally speaking, the buyer is under no compulsion to buy. If we look at the problem as a cold-blooded economic situation, we can even argue that the desperate need of families for shelter has a price itself that may be translated into market value. That is, where we find a family willing to pay $7,000 for a house that should be reproducible for $4,500 we can say that $7,000 is in fact the real present-day value, because it is merely the result of a terrific demand meeting a short supply. This could be true even where we were certain that within six months the amount of new construction would so relieve the shortage as to restore reproduction cost as the upper limit of value, as it always was heretofore.

There is substantial economic justification for this viewpoint. If any assessor was asked for advice by his next door neighbor who wanted to dispose of his house, he would undoubtedly

advise him of the most recent sales of comparable properties and suggest that he act accordingly. In other words, it is much more than probable that the advice would be to hold out for the high dollar, regardless of what the reproduction cost of the dwelling might be. But, while the viewpoint may have economic justification, it has little administrative sense and not much justice to support it. We all know that there is much more to assessment technique than finding out the last sales price of a typical property. It should be emphasized, however, that other phases of assesssment work were kept continuously in mind by the Council members in issuing the accompanying statement; it was not a case of overlooking any economic principles or laws. Rather, they were most carefully considered, but adapted to administrative common sense and the assessing officer's sense of justice.

All of this is equivalent to saying that the sum, covering "bonus for shelter," or "premium for immediate occupancy," included in recent sales temporary phenomenon and possible only because so few houses are for sale. For these reasons, the Council believes the assessor would be wise in refusing to recognize such excess payment as a fair indicator of market value.

Construction Costs

The fifth point in the Advisory Council's statement concerns construction costs. Note that a big distinction has been drawn between the increase in sales price traceable to the desperation of the buyer and increases which have resulted from increases in labor and material prices. The first is expected to be of brief duration, while the second is considered to be relatively permanent. That is why the Council suggested that the first be disregarded and the second be accepted as criteria of value. There is much evidence available to support the contention that the increases in material and labor prices are likely to be permanent and even move up to higher levels. Let us consider some of the evidence.

First, there is the strong political position of organized labor. Labor insists on a larger portion of the fruits of its labor and is much better prepared to press its claims than ever before.

The index of construction costs, prepared by the U. S. Department of Commerce, shows that the cost of labor in building construction has been advancing steadily since 1939 and today is approximately 40 percent higher than it was in 1939. In the same time, building materials have advanced 33 percent in price.

Our national debt has risen from $73 billion (before the war) to $273 billion today and may level off at about $300 billion. This will require nearly $6 billion to pay annual interest charges alone, not to mention amortization of principal. A high national income will be very helpful in discharging this obligation. A high level of wages generally accompanies a high national income.

History shows that after each of the wars in which America has engaged the general price level has been somewhat higher than prior to the time the war started. And this has been true in spite of the formerly inevitable depressions that followed along in the wake of the wars. As a matter of fact, this type of inflation is one of the typical ways of liquidating the debt incurred in financing the war.

It should be pointed out, of course, that when the Advisory Council said that it expected increases in the cost of labor and materials to remain, it had in mind only the near future. No one can foresee what is likely to happen after five years or so, and especially is this true now that we are entering the atomic age. But apart from that, there are two real ways to reduce costs. One is to pay labor less, the other is for labor to produce more. We are not going to pay the worker less for his labor, but all sorts of technological advances should steadily increase the output of labor, and result in reduced real costs. Even so, it would not necessarily follow that cost, in terms of dollars, would be reduced too, but that could happen. Regardless of these speculations, the Advisory Council takes the position that increases in the value of real estate that can be traced to increases in the costs of labor and building materials are real reflectors of value and should be recognized as such.

Upper Limit—Reproduction Cost New

The conclusion, in point No. 6, that assessments should not exceed the reproduction cost new, even where this is substantially below the price at which the property recently sold, was not arrived at casually. It is a product of some rather sharp debate and much careful reflection. It includes a special consideration of the handicaps and difficulties which accompany most of the administrative tasks of the assessor. If followed, the assessment rolls of most assessors should show substantial increases, but increases that are likely to remain for some while. The Advisory Council recommends a policy which is mid-way between an ostrich-like attitude of refusing to believe that real estate values have increased at all and the other extreme that even the wildest prices are a fair reflection and determinant of value for tax purposes. Again, the statement seeks to distinguish between what is somewhat permanent and that which is considered temporary. While some of the reasoning behind the statement might possibly be offensive to some economists, it is likely, I believe, to find general acceptance among administrators, public officials, and what is most important, the taxpayers themselves—and especially that portion of the latter represented by the distressed families which paid such outrageous prices for shelter.

We assessors are believers in justice. We are among its professional defenders and champions. There are times when strict economic and legal concepts may have to be pushed slightly to one side to make room for the much more important virtue of justice, and I believe the statement of the Advisory Council is one example of this.

State and Municipal Immunity from Federal Taxation Affirmed by U. S. Supreme Court

IN A decision of great importance to local governments and authorities, handed down January 14, 1946, the United States Supreme Court permitted a federal excise tax on the sale of bottled waters by the Saratoga Springs Authority, but only after reaffirming the basic doctrine of state and municipal immunity from taxation by the federal government.

The Bond Buyer publishes in its issue of January 19 a detailed discussion of this decision in which Austin J. Tobin, Secretary of the Conference of State Defense, points out that in determining the particular tax to be constitutional, the prevailing opinion of Justices Stone. Reed, Murphy, and Burton holds "that only those activities of State government which are departures from governmental functions into the field of ordinary business operations may be taxable, and in that we have a liberalization of the familiar 'governmental function' limitation of recent cases. Also many hurtful arguments recently advanced by Court majorities to restrict state and municipal immunity, have fallen by the wayside. Finally, we have the strong support of Justices Douglas and Black, which will be a potent force in all future decisions on intergovernmental tax immunity."

Thin Paving Goes Farther

. . . if it has sound engineering to back it. The experience of Wyandotte, Mich., shows how a street program can become a real municipal asset

By F. W. LIDDLE
City Engineer
Wyandotte, Mich.

IT HAS been a lot of fun watching the street paving program grow, particularly from the close and intimate vantage point of a city engineer. There is a great satisfaction in helping to build something that gives as real and lasting a benefit to a community as residential streets.

Out in front of our city hall is a wide, brick-paved avenue that was built forty years ago. In some way or other it seems symbolic to us here in Wyandotte that this street should have served so well. After forty years of carrying heavy traffic of all types that street is still smooth and durable. I wouldn't be surprised to see it give us another twenty-five or thirty years of service without any appreciable increase in maintenance costs.

Good Work Builds Confidence

That well constructed old job paid us dividends in all our subsequent work because of the confidence that our people now have in the projects that we build. An engineer is able to operate much more efficiently when the people he serves believe in him. Our present paving program illustrates this.

Back in 1938 we decided to lay some street slab five inches thick, and you should have heard the uneasy and earnest protests that came from our fellow engineers. According to all our more vocal, strong-minded colleagues, we were plainly crazy. Anything that thin, they told us, shouldn't be used in a sidewalk, much less a street; and wouldn't we please take their advice and add a few inches to the slab depth? We had engineers from all over the country coming to Wyandotte, looking at our jobs, and shaking their heads dourly.

Light Section Studied Carefully

But the city backed us up. We had been building a whole lot of things for them during the past quarter of a century and all had served well. Consequently there wasn't any particular reason for them to believe that we would turn up with a dud design now. We went ahead knowing that those who were going to use the street had confidence in our work.

As a matter of fact, that pioneering use of a light section represented the result of some mighty careful thought on our part, and its general use elsewhere substantiates our judgment, although we would rather take folks out and let them see the slab today.

Using Less Material

We decided a long time ago that the most effective way to lower costs in city streets was to reduce the amount of material used in them. A cost analysis disclosed that the finishing, curing, formsetting, and similar features of street construction were small items when compared with the actual cost of the material itself. Consequently, if we were going to lower the price of streets, we had to hit where it counted.

Furthermore, three and four dollars per square yard was just too much pay in modest neighborhoods; nevertheless these neighborhoods deserved a clean, serviceable, all-weather street just as the more affluent portions of our city already had, and it was up to us to figure out the answer.

The first thing that we did was to

TOP LEFT: *Auxiliary strips of sidewalk next to the curb constitute an inexpensive extra that Wyandotte furnishes to churches, schools, and other civic buildings.*
TOP RIGHT: *The contractor builds the streets in Wyandotte half width at a time. Here a Caterpillar tractor pulls a sub grader preparatory to laying second half*

LEFT: *By building the street level well below the elevation of the natural ground, Engineer Liddle is able to give added dignity and charm to houses even in the lower price class. Notice in the foreground that the curb has been notched out to allow the sidewalk to slide over it when this phase of construction is complete*

compare the flexible type of pavement with the rigid. Let it not be said that we want to generalize for the entire country, but as far as Wyandotte was concerned, we felt that concrete was the answer. The various arguments between flexible and rigid pavements have been bandied back and forth for more than a generation now; however, at the risk of being repetitious, here are a few that weighed our decisions.

First, since the flexible type of surfacing cannot be relied upon to produce flexural, beam, or slab strength, the subgrade must be above average in quality. The soil in Wyandotte is a black loam and while it has proved acceptable for concrete paving, we doubt that it would give satisfactory service for the non-rigid type. In fact, we have had the chance to watch surfaces of this type operate in our area and have not been impressed with the results.

Another feature is maintenance. When a flexible-type roadway gives way, it goes quickly. Cars pound the pot-holes heavily and the street's inability to resist impact aggravates a rough, undesirable condition. Maintenance has to be prompt, thorough, and is often difficult to perform.

Still another feature is the general scheme of municipal financing. We pay for street construction property assessment but maintain them out of the general funds. Consequently we are only fooling ourselves if we raise the costs of maintenance in an effort to lower the original cost of the pavement.

Improved Design Lowers Pavement Cost

In any case, we are not convinced that our pavement costs any more than a flexible type designed to do the same job. As mentioned previously, we have hit what we believe is the main point of contention when we reduced the thickness of the slab to five inches. We didn't just blindly whittle off two or three inches. We estimated the subgrade bearing power at 20 pounds per square inch, and on this basis calculated that with the design we adopted the 6,000-pound rear wheel load would produce a unit stress of 298 psi and that there was no limit to its allowable stress repetitions; we arrived at similar conclusions for a 7,000-pound wheel load, with the unit stress going to 347 psi. The 8,000-pound load we calculated would go to 397 psi and 35,250 stress repetitions or 1,410 per year could be carried. A 9,000-pound wheel load we found would produce a unit stress of 447 psi and would carry 12,300 repetitions or 492 per year for a 25-year span; and the 10,000-pound span will produce a unit of 496 psi, standing 4,250 repetitions of 170 per year. These, it can be seen, allow our design of 7-5-7 inches to carry the load nicely.

We have followed customary principles of good practice in modern street construction by building integral curb and gutter, thus making the slab even more of a structure. As the classic Bates road tests indicated, a slab requires strengthening at the edges—produced by highway designers with a wedge-like thickened section. By making integral curb and gutter, however, we can use the curb as a flange and give the same edge strengthening without the necessity of thickening the slab. In effect, this design makes the entire section work.

The integral curb and gutter has one disadvantage—if we want to widen the street, we have to knock off the curb and grind down the broken portion. This is of course a difficult operation and does not make for smooth work-

ABOVE: *The finishing machine shapes the curb and the slab at the same time by use of the notched section in the screed.*
LEFT: *Projects big enough to allow the contractor to set up for plant sized construction result in lowered costs to the city.*

BELOW: *A Fordson tractor with a Good Roads blade does some final clean-up work on part of the Wyandotte street construction program*

manship. However, we feel that the widths of the streets we have designed are adequate.

How Curb Is Built

One factor received special attention in our method of construction. It is customary to build curbs by finishing off the slab, putting some concrete aside, and then building the curb up from the slab as one of the last operations. There are times when this may not work so well—the operations may be delayed somewhat, and if the slabs have begun to set, the curb will not always bond as well as it should. Thus there is the possibility that we will lose advantage of the curb's flange action. Consequently our construction procedure has been to shape the curb section as we finish the slab. The contractor has been able to do this by notching the finishing machine screed to conform to the curb cross-section. Thus, as the slab is finished, the curb also is left in rough shape, formed in a true integral fashion and requiring only some final touching up by the curb builders.

The method has an additional factor in its favor in that it actually cuts the cost of the slab. The concrete is automatically put into place; handling is no greater.

How Street Construction Fits into City Planning

A street improvement program ought to keep four or five years ahead of the community's development all the time, at least as far as planning is concerned. If the city engineer knows where his streets are going and takes the time to lay his grades before the area is built up, he can greatly contribute to attractive community development.

We always lay our grades about two feet below the existing ground level, much to the discomfort of some observers who cannot visualize the finished street. By so doing, we produce an easy slope from the house to the street level. This makes the houses stand out and sets them off to their best advantage.

By preparing these plans well in advance, we are able to help the potential home owner when he builds. When a building permit comes to our office, we send a surveyor out with instructions to set grade stakes for the new home. Our preliminary work has located the water, sewer, and other utilities, and by giving him a grade in conformance with the future street improvement, we insure that he will get the most value out of his new home.

Plans laid in advance have allowed us to arrange paving programs that are attractive to the contractors. Last year we paved 86,600 square yards and got the encouraging price of $1.79 per square yard. We designed the concrete for a 3,500 psi compressive stress at 28 days using 602 pounds of cement to 1,480 pounds of sand and 1,508 pounds of slag to produce a cubic yard batch. Our experience has been that the contractors want chiefly enough yardage so that they can get their equipment rolling, and that they will not be too unduly alarmed if they have to chase around town a bit to do the work.

Integral Curb and Gutter

The contractor for last year's work used a Rex single-drum mixer to lay the concrete. He proportioned the materials with a pair of Johnson bins located on each side of a Butler bulk cement batcher, arranging his equipment so that the trucks could pick up their loads by driving through the legs of the bins without any backing or maneuvering. His practice was to pave one side of the street, and then come back later and pave the other, using the previously laid slab as one of the side forms.

The design utilized many of the features that are popular in this area. We notched out the curb to allow the sidewalk to slide over it, rather than letting the sidewalk butt against the curb and create the possibility of cracking it. We have eliminated all steel except for dowel bars and in last year's work we did away with them also. We have placed expansion joints at the intersections only and have put contraction joints at 15-foot intervals, with the result that the contraction joint gaps, although frequent, are small and easily maintained.

Little Extras for Good Will

There is a word that might be said regarding street construction and the city. One little thing that we have done that hasn't cost us much and has resulted in a lot of good will for us has been our sidewalk construction program. In Wyandotte, in front of every church you will find a strip of sidewalk adjacent to the curb. We have built this without being asked or without charge to the church, and it has been truly appreciated by the parishioners. We have done the same around each school, both public and parochial, the Masonic Hall, around the YMCA and the I.O.O.E. Temple. The cost has been low. Our maintenance crews have done the work in periods when work has been somewhat slack. We have been prompt about repairing sidewalks and drives and otherwise keeping the streets and their appurtenances in first-class shape. It is the little things like that that are noticed when someone comes to your town, not so much if they are done, as if they are left undone. By being prepared to perform those little extras, you renew the confidence your city has in you. Programs of this kind cannot be initiated, however, without a cooperative and understanding mayor and council.

Texas Uses DDT in Typhus Control Program

TEXAS is currently experimenting with DDT in its typhus control program and is obtaining some significant results. Dr. George W. Cox, State Health Officer, reports that since rat fleas are believed to be vectors transmitting typhus fever from diseased rats, the Texas Health Department is studying flea control to precede rodent control in order to eliminate a possible danger when infected fleas leave the body of diseased rats.

"In our control program," Dr. Cox reports, "a 10 percent DDT dust is used to dust rats and burrows in infested places before we do any poisoning or trapping. The evaluation studies indicate significant results. We have discovered in selected areas where live rats have been trapped that the average number of ectoparasites (rat fleas, lice, and mites) per rat has been reduced from approximately 30 to less than one. An entomological study in one of our larger Texas cities, where we conducted this work last year, indicated that where we would normally expect 25 cases of typhus fever only four have been reported this year to date."

The department is also making research studies on a mixture of various powdered rodenticides with DDT dust with the thought in mind that rats and rat fleas can be controlled simultaneously. Some indication points to the possibility that DDT might be an effective control measure for the rats themselves if they take the powder internally. However, Dr. Cox states that this will require further investigation and study.

The department is also using DDT sprays in an extended malaria control program in certain communities. The program consists of a rather complete coverage of the communities by DDT sprayed in the homes of individuals.

Public Relations for Municipalities

Municipal Reports in Capable Hands

IN RECENT years a number of cities have been enlisting the aid of the municipal reference librarian in preparing the annual report to their citizens, and have done away with the cumbersome system of separate departmental reports — among them New York, Cleveland, Cincinnati, and Memphis. Norman Gill, former municipal reference librarian of Milwaukee, Wis., reports the success of these "consolidated reports" in a recent issue of the "Library Journal." Mr. Gill bases his article on the experience of Milwaukee, one of the first large cities to turn over to the reference librarian the preparation of a concise, readable, and comparatively inexpensive summary of municipal activities.

Milwaukee's first over-all report of the activities of city governmental units was issued in 1922 and was so favorably received that the Common Council adopted an ordinance in the following year which provided for close cooperation of city officials in submitting reports of departmental activity to the librarian, and also appropriated a sum sufficient for the editing, publishing, and distribution of the final reports. The city has benefitted by savings of time, material, and money in the preparation of these reports. Twelve departmental appropriations in 1920 totaled $4,350; yet the cost of the 1944 annual report for all departments was only $2,200!

Better Municipal Reporting in Connecticut

CONNECTICUT communities are becoming aware of the fact that better municipal reports contribute to the cause of better local government, according to the Connecticut Public Expenditure Council, Inc. This organization two years ago published a brochure entitled "Modernizing Municipal Reports," which was distributed among public officials in all of the state's 169 towns and cities. Since then, the Council has consulted with local departments and officials on the question of better town reports.

The New England Council, in an effort to further the cause of better municipal reporting, has sponsored the New England Municipal Reports Competition. Eleven Connecticut communities entered their reports in the New England Council contest and five of them, Bloomfield, Greenwich, New Haven, Stratford, and Wethersfield, received awards for outstanding contributions. The material was judged not upon the basis of elaborateness but rather upon the presentation of clear, informative, factual data.

Particularly in the field of finance, simplified and concise information enables the citizens and taxpayers to take a more active interest in local government. As more informed citizens participate in the operation of their local government, local self-government, in turn, will be strengthened.

City Planning on the Air

CITIZENS of Cincinnati, Ohio, have first hand information about their city's Master Plan brought to them every Sunday in the "Planning Cincinnati" radio series sponsored by the Citizens Planning Association. The series was initiated on January 27 and will cover a period of thirteen weeks during which time citizens, planning technicians, and experts on municipal problems will discuss current city problems and future plans.

Under the general theme, "Planning is for People," the speakers answer questions which the citizens have been asking about the plan in addition to suggesting other questions the planners themselves have. The participants will survey the resources and prospects of the area and suggest action the citizens can take, in cooperating with planners and officials, to assure a better city. Programs will deal with traffic problems, housing, population resources and adjustments that will have to be made to population alteration in the future, together with an over-all survey of economic opportunity and development in Cincinnati.

Seven Tough Years

"NEW YORK ADVANCING," the third volume in a series of achievement records of the LaGuardia administration, appeared shortly before the conclusion of that administration after three successful terms in office. This last sequel covers the story of New York's contribution to the war effort and her plans for the future.

The book, over 390 pages long and profusely illustrated, was edited by Rebecca B. Rankin, Municipal Reference Librarian. It includes the mayor's final report and articles about the functions and activities of the various departments, written by the officials in charge. Particularly interesting is the section entiled "Citizen's Education and Recreation" which contains an account of the schools, libraries, colleges, museums, and other educational facilities of New York and which also takes stock of the progress of two rather new municipal ventures, the radio station WNYC and the City Center of Music and Art.

The arrangement of the illustrations is noteworthy. Both, photographs of municipal milestones—bridges, housing projects, highways, and post-war plans, and action shots depicting New York's war experiences, such as the Empire State building fire, the reception for Admiral Nimitz, and other historical highlights, are included in the volume.

The end papers, which were designed by Richard C. Guthridge, present "New York Today and Tomorrow," a three color map showing all completed and all prospective improvements. The cover shows New York's City Hall and the Municipal Building, the frontispiece features the Eisenhower parade in June 1945. The book is printed on glossy paper, is cardboard bound, and is available at one dollar a copy from the Municipal Reference Library, 2230 Municipal Building, New York 7, New York.

Directory for Winter Sports

IN THE belief that telling the public about winter sports facilities provided for their enjoyment is as important as providing the areas for such fun, The Union County (N. J.) Park Commission has published a new edition of an eight-page folder on winter sports facilities.

A unique cooperative arrangement with other public departments and sport shops throughout the county is outlined so that residents in various municipalities in Union County may call one of their local organizations for latest information on snow and ice conditions in the county park system.

Civic Understanding Via the Motion Picture

By JAMES A. RHODES
Mayor
Columbus, Ohio

ONE of the great problems of municipal government, as any administrator knows, is to sell the city to the people who pay its taxes. Columbus is like every other city in this respect. We have tried to do it through the newspapers, radio, and public appearances; while these methods are effective, they cannot begin to compare with a newer, more powerful medium which we recommend to every local administration.

I refer to the motion picture.

Financing the Project

In January 1945 some of us had the idea to produce a sound motion picture that would tell the story of the city and its advantages. It was to be designed primarily for showings before clubs, service, church, and civic groups, and for use in the school system.

We had no idea of the cost of such a project, nor how we would raise the money—and it was obvious that the picture could not be financed out of public funds.

We called in an experienced motion picture production company — Escar Motion Picture Service, of Cleveland. We discussed the aims and purposes of the film with them. It was estimated that the film we had in mind could be produced for around $25,000.

The next step was to raise the money. As it turned out, this was the easiest part of the undertaking. We called a meeting of some of the city's leading industrial organizations. After outlining the plan and its objectives, we asked for subscriptions from the firms represented. The contributors were to have at their disposal a proportion of the film in which their organization or its products would be shown. The length of the sequence to be in proportion to their contribution, but in no case was it to be longer than two minutes.

The full amount was subscribed before the meeting was over. A committee was appointed to handle and disburse the funds collected.

Preparing the Script

The next step was to prepare a script. A member of the Escar staff was assigned to work with us. After a few meetings we came up with what is

These pictures are stills from "This Is Columbus," a motion picture made by the city with professional help and the backing of local industries as a civic promotion project

called a "treatment," a summary of the contents and story form to be followed.

The motion picture people were concerned lest the contributors would insist upon direct sales presentations of their products which, in Escar's expert opinion, would be obnoxious to the audience. A writer assigned to the job called on each of the subscribers with the story treatment, explaining the necessity of showing only manufacturing or retailing procedures that had an educational or interest value. In every case, he received the utmost cooperation. It is the opinion of persons who have previewed the film that the industrial sequences are among the most interesting parts of it.

The Story Told

When the industrial sequences had been prepared, the final shooting script was written.

That Columbus is a fine city in which to live and work is the theme of of the picture. The film opens with views of the municipal airport, where a Columbus oldtimer has come out to meet the plane which is bringing an old friend back for a visit.

The friend arrives and the two old cronies take a look at the town. An album of early views of the city is introduced. The old views are shown and each one is followed by a shot taken from the same camera angle, showing the location as it appears today.

The social background of the city is depicted through its schools, churches, art museum, libraries, newspapers, radio stations, and outstanding civic organizations. Playgrounds and parks add human interest to these scenes.

The city's transportation system and public utilities are shown, demonstrating that they serve a busy retail section and a public that takes pride in home owning.

The two men recall scenes of their boyhood and the camera shows how those same things appear today. The old swimmin' hole, for example, is now a great recreational area and reservoir for the city's water supply.

The film shows the civic services provided by taxes, including water supply, police, and fire protection, etc.

One of the most dramatic episodes is the reenactment of a three-alarm fire. It happened that the building in which the fire was staged had actually caused a three-alarm blaze some time previously. The owner had not yet begun repairs. The fire department cooperated to reenact the original fire. The result is a fire that outdoes Hollywood for real atmosphere.

The Satisfactory Result

The film is entitled "This is Columbus" and runs fifty minutes on the screen. At the recent preview, the thousand people who had been invited cheered the final result. Everyone, particularly the sponsors, feel that the production is well worth the time, effort, and money that went into it.

Hundreds of local bookings have already been made, requests for a copy of the film have come in from all over the country and the Office of Inter-American Affairs has requested a print to show to South American audiences.

Already, many other cities have requested information regarding the production of such a film. We are glad to comply with these requests and can heartily recommend the project as one of the finest civic promotions ever undertaken in the public interest in Columbus.

Trends in Living Memorials

THE moot question of static versus living memorials receives new light in a brochure entitled "Commemoration Through Community Services," just published by The American City Magazine Corporation.

Proposing, as the highest type of war memorial, the building of a worthwhile community life, and pointing out that "a people justifies its memorials by carrying forward the vision and courage of those commemorated," the brochure dramatizes in more than one hundred photographs and plans its basic theme—that "the unfinished task of democracy is to build the community at home and in the world."

This timely publication, edited by Anne Holliday Webb, presents discussions by such leaders in community service activities as Howard Braucher, President, National Recreation Association (on "Re-creation in the Community"); Daniel Danzig, Program Director, United Service Organizations, Inc. (on "The Community Center Building"); Edward T. Hall, Director, Universal School of Handicrafts (on "Hands—Health—Happiness"); Mark A. McCloskey, Director, Community War Services, Federal Security Agency (on "Living Services—Our 'In Memoriam' "); Paul R. Sheats, Educational Director, The Town Hall, New York (on "Talk It Out"); George D. Butler, National Recreation Association, Association, New York (on "What Does Your Town Already Have?").

Types of memorials and proposed memorials illustrated include among others, community building, civic center, city hall, museum, library, auditorium, municipal theater, park, playground, swimming pool, bandstand, carillon, clock tower, flagpole, fountain, community forest, boulevard, and bridge.

An important section presents suggestions for organizing a local citizens' council and war memorial committee.

The ideas and pictures presented in this brochure are designed to be of value to all local leaders now trying to decide how their communities might most wisely commemorate the services and sacrifices both of the veterans now returning to their homes and of those who will never return. It offers valuable suggestions not only for communities needing new buildings, but also for the hundreds of cities and towns already having structures, now adequately used, in which needed community services might effectively be carried on. Many of the illustrations in the brochure show such activities.

A special feature of "Commemoration Through Community Services" is a double page spread — here reproduced in smaller size—prepared especially for THE AMERICAN CITY, by architect Antonin Raymond, of 101 Park Avenue, New York, showing charts of principles for a community center building of a type which might be developed in three stages, if desired.

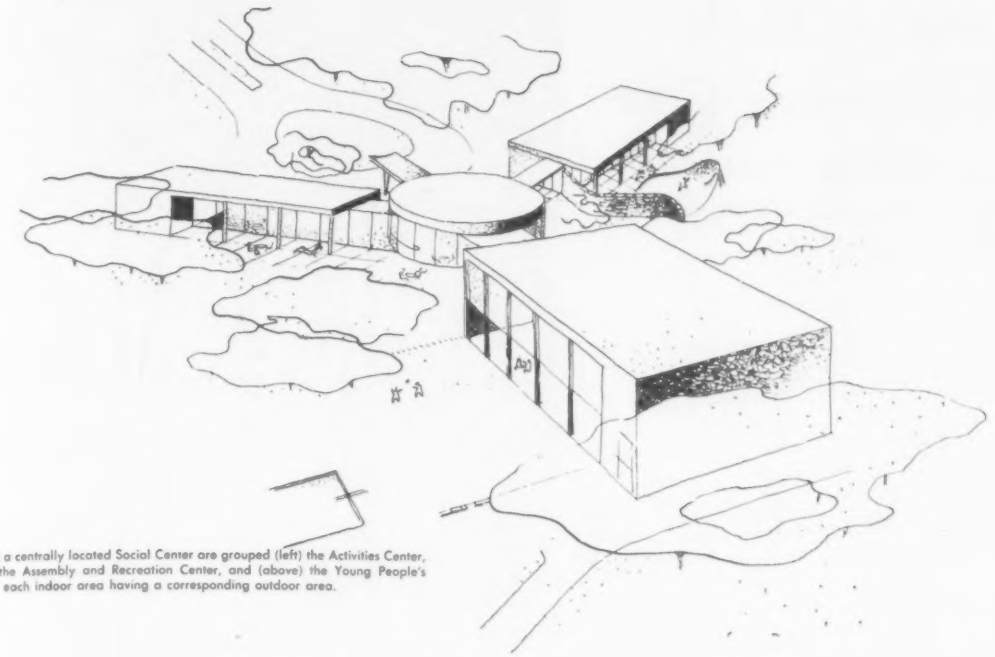
This brochure of 36 large pages (12¼ x 9¼ inches) is obtainable at $1.00 for single copies, and at lower price in quantities from The American City Magazine Corporation, 470 Fourth Avenue, New York 16, N. Y.

Front Cover Pictures

The pictures on this month's cover are from "Commemoration Through Community Service," the new publication described on this page. Beginning at the top and proceeding from left to right, they are the Thomas Branigan Memorial Library at Las Cruces, N. M.; the Fine Arts Center at Colorado Springs, Colo.; the Slossfield Community Center for Negroes, Birmingham, Ala., the Community Arts Theater, which is one unit of the Community Center at Palo Alto, Calif.; and the World War I Memorial Building at Bismarck, N. D.

SCHEMATIC ARRANGEMENT OF A COMMUNITY CENTER BUILDING—GENERAL VIEW

Antonin Raymond, Architect



Around a centrally located Social Center are grouped (left) the Activities Center, (right) the Assembly and Recreation Center, and (above) the Young People's Center, each indoor area having a corresponding outdoor area.

ARCHITECTURAL GUIDES

1. The community creates its own living program. The type and character of the building is determined by this program.
2. Adults, adolescents, and children require their own special spheres of activity within a unified whole, thereby giving to each age-group a sense of freedom and ease.
3. The community center's usefulness will be enhanced by relating its location closely to other community activities.

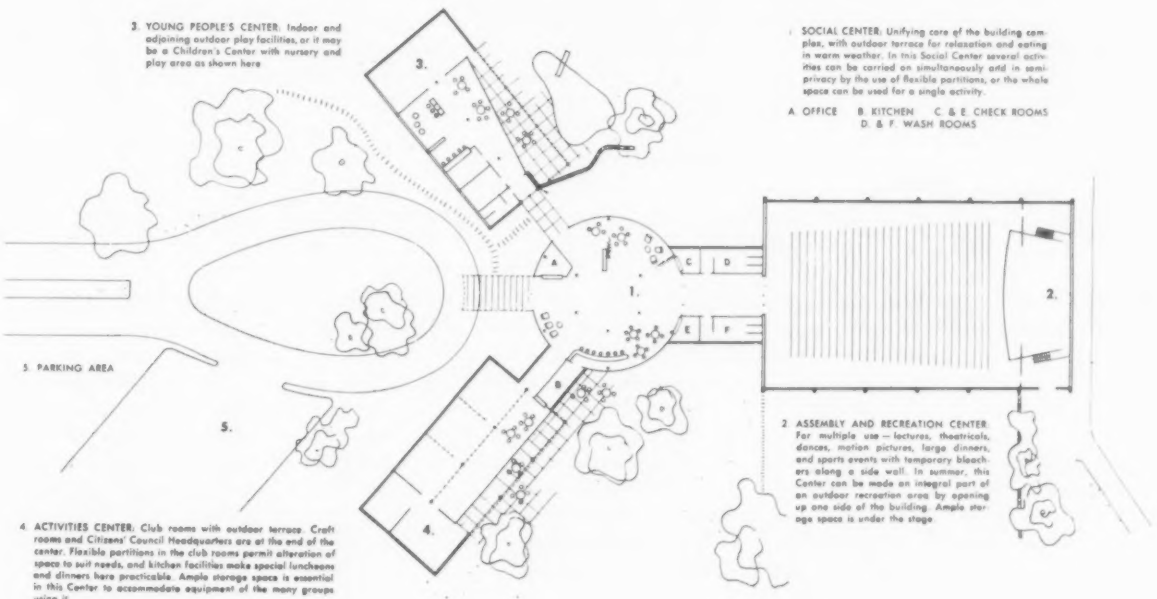
INDOOR-OUTDOOR RELATIONSHIP

The one-story character of the building scheme here illustrated, with its semi-autonomous wings, makes possible a closely integrated outdoor and indoor recreation area for each wing. Thus a playfield adjoins the Young People's Center, terraces serve the Social and Activities Centers, and the Recreation and Assembly Center gives on to a large recreation area which can be made an integral part of the interior when desired.

FLEXIBILITY AND INTERCHANGEABILITY

A community center should be so designed as to provide multiple use of the same areas, thereby making it possible to change activities when desired instead of having them frozen into set patterns by fixed room purposes. Moreover, a flexible environment will encourage ingenuity, spontaneity, and the element of surprise in social experience.

SCHEMATIC ARRANGEMENT OF FLOOR AREAS AND CORRESPONDING OUTDOOR AREAS

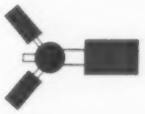

3. YOUNG PEOPLE'S CENTER: Indoor and adjoining outdoor play facilities, or it may be a Children's Center with nursery and play area as shown here
1. SOCIAL CENTER: Unifying core of the building complex, with outdoor terrace for relaxation and eating in warm weather. In this Social Center several activities can be carried on simultaneously and in semi-privacy by the use of flexible partitions, or the whole space can be used for a single activity.
A. OFFICE B. KITCHEN C. & E. CHECK ROOMS D. & F. WASH ROOMS
5. PARKING AREA
2. ASSEMBLY AND RECREATION CENTER: For multiple use — lectures, theatricals, dances, motion pictures, large dinners, and sports events with temporary bleachers along a side wall. In summer, this Center can be made an integral part of an outdoor recreation area by opening up one side of the building. Ample storage space is under the stage.
4. ACTIVITIES CENTER: Club rooms with outdoor terrace. Craft rooms and Citizens' Council Headquarters are at the end of the center. Flexible partitions in the club rooms permit alteration of space to suit needs, and kitchen facilities make special luncheons and dinners here practicable. Ample storage space is essential in this Center to accommodate equipment of the many groups using it.

EXPANDABILITY

The design of a community center should permit expansion of the building as activities increase, without requiring extensive modifications. The designs here shown have been worked out to allow for three stages of growth as indicated in the accompanying diagrams.

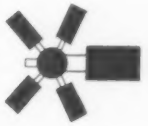
STAGE 1

Small community center providing social center and all-purpose recreation hall.



STAGE 2

(Scheme illustrated) Stage 1 with the addition of either a Young People's Center or a Children's Center and an Activities Center.



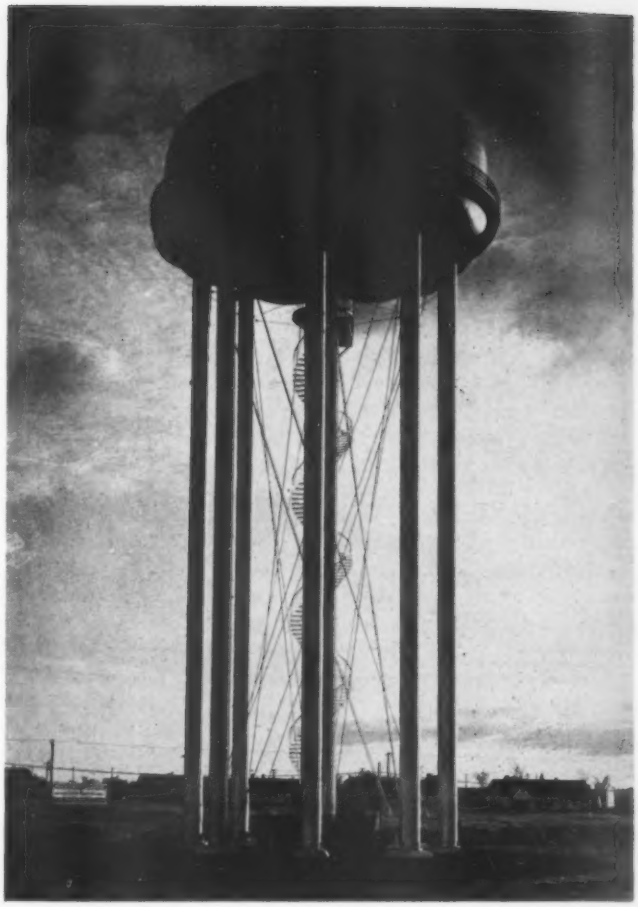
STAGE 3

In this form existing functions may be broken up to provide centers for both young people and children, and a center for all the arts, a library, swimming pool, or other facility according to community developments.

(See "Trends in Living Memorials" on preceding page)

Escanaba's Overhead Water Storage Tank Cuts Pumping Cost

A new half-million gallon overhead storage tank at Escanaba, Mich., will lower pumping costs by $2,500 annually



Escanaba's new attractive water tower proves an important factor in the efficient operation of this city's water supply system

THE community gets better water service, the fire department gets a more adequate supply of water for fire-fighting emergencies, and the water department gets an improvement which eases pumping problems and reduces costs. All this is the result of the new overhead storage tank that was installed recently at Escanba, Mich.

Water Consumption

The tank gives this city of nearly 15,000 population a central storage point for the four wells that furnish the community's water. These wells, operating through electrically powered Pomona pumps, distribute the water through 38 miles of distribution system with mains varying in size from 16 to 2 inches. The tank floats on this distribution system.

The city uses an average of 1.35 mgd of water with a maximum consumption of 4.3 mgd and a minimum of 0.9 mgd. There are 3,430 meters in the system and 294 fire hydrants. Average per capita consumption is 100 gpd.

The tank, a Chicago Bridge and Iron installation, has a radial-cone bottom and an ellipsoidal roof. It is supported on eight cylindrical columns and is 110 feet deep. The cylindrical columns are 3 feet 5 inches in diameter; the central riser is 6 feet in diameter. The range in head between the upper and lower water levels is 25 feet.

The tank was built in the summer of 1945. It maintains a distribution pressure of 54 to 65 psi throughout the distribution system.

Chicago's Douglas Airport Planned for Safe Flying

ONE of the safest and most convenient, as well as one of the largest airports in the world will be built with the present federally owned Douglas Airport on the outskirts of northwest Chicago as a nucleus, if plans of Mayor E. J. Kelly and Public Works Commissioner Oscar E. Hewitt go forward successfully.

The present Douglas Field, northwest of Chicago in the vicinity of Park Ridge, contains 1,325 acres and is owned by the federal government. Chicago already has made application to the Army and the Surplus Property agency for the release of this acreage in order to form the nucleus of the city's principal airport.

This potential airport, including property of the federal government, would contain 5,232 acres, which would mean that the city would have to acquire 3,908 acres through condemnation or purchase. The added land lies principally to the south of the federally owned area, although some lies to the north and a little to the east.

The estimated requirement of 5,232 acres is on the basis of a tangential runway pattern of ten runways, varying in length from 6,150 to 7,700 feet, with two or more runways capable of being extended to 17,000 feet. The tangential system proposed will accommodate the take-off or landing of 360 planes an hour, according to the airline's method of calculating plane movements. This area is larger by 400 acres than that which has been acquired for Idlewild Field in New York City.

The plan for this airport calls for an express highway which has not been fully designed. The present estimate of cost is approximately 75 millions.

The estimated cost of the airport has not yet been carefully figured. Commissioner Hewitt states that it seems reasonably certain that the land will cost 40 million dollars. It may cost more, but the acquisition of land will not be nearly as expensive as the reported price paid for the Idlewild acreage. The runways, buildings, and other facilities will more nearly approach the cost estimated for the Idlewild facilities.

Chicago is expecting federal assistance in the construction of the proposed improvements. Officials are basing their request for assistance on the argument that the airport will meet not only a municipal need but will actually provide interstate and national service for peacetime commerce and national defense.

When Developers Want to Dedicate Streets

Procedure Adopted for Township Subdivision Street or Road Establishment in Hamilton County, Ohio

By WILLIAM W. KELLY, Sr.
Executive Director
Hamilton County Regional Planning Commission
Cincinnati, Ohio

THROUGH the cooperative efforts of our Planning Commission and the offices of the County Engineer and County Prosecutor, a very constructive piece of planning procedure was adopted by the County Commissioners recently. The new regulations provide procedure for the County Commissioners to follow before approving the establishment of any private street or road within or without a subdivision as a public township street or road.

The chief purpose in drafting this procedure was to set up some very necessary requirements for property owners and township trustees to meet before any serious consideration could be given to the matter of public road establishments by the County Commissioners, and to make such information available to applicants. The fact that a subdivider's plat that has previously been approved by the Cincinnati Planning Commission or the Hamilton County Regional Planning Commission and states specifically certain property owners' willingness to dedicate certain property for future public right-of-way use, does not in itself constitute an act of establishment.

In accordance with the General Code of Ohio, township roads can be established legally only through an act of the County Commissioners, and this must be done before any public funds can be spent for their further development and maintenance.

The present plan provides for studies and written reports from the County Planning Commission and the offices of the County Engineer and County Prosecutor covering the planning, engineering, and legal factors involved in each application for township road establishment before any action is to be taken by the County Commissioners. Therefore each case is disposed of on the judgment to which it is entilted through investigations and recommendations.

This has become necessary, especially in the unincorporated area surrounding Cincinnati, largely because of the numerous cases in the past where subdividers in carrying out their construction work, after having received approval of their plats, have failed to follow the standards shown on them. Strict adherence to the rules contained in the following procedure, adopted by the County Commissioners here, should be responsible to a great extent in the future for more satisfactory compliance with established planning and engineering standards.

1. The plat accompanying any such proposed establishment shall provide for a right of way of not less than fifty feet in width, together with, in the case of a pre-existing thoroughfare, a pavement not less than eighteen feet in width.

2. No such proposed township road establishment shall be considered unless and until the petition and plat purporting to dedicate said thoroughfare shall be accompanied by the written statement of the Township Trustees for the Township in which such proposed road is located, assenting to such establishment.

3. Any and all such proposed establishments shall be referred by this Board to the Regional Planning Commission of Hamilton County and to the County Engineer for investigation and report relative to the need for and public benefit of such establishment, and also as to its practicability, in view of the expense of maintaining or repairing any such establishment and in view of its adaptability to established plans for public road development within the county and for such other factors as may be necessary for the Board of County Commissioners to determine the desirability of any such establishment.

Architectural Control by Ordinance

REALIZING the inherent dangers of a building boom without adequate zoning and subdivision control, several Wisconsin cities have attempted to control the problem of property depreciation by ordinance. The reasoning behind this step was discussed in a recent editorial in the *Milwaukee Journal* which says in part:

"A number of Milwaukee county communities seem to be determined to stop the building of oddities . . . that will depreciate neighborhood property values.

"We do not doubt that a community has a right to protect its tax base and its general appearance. Under orderly procedure it may have a right to tell men what and how they can build.

"Nor need regulations be confined to structural factors. The highest courts in some eastern states long ago held the protection of safety—that is, structural security—is not necessarily the whole aim of regulation. The people who have paid for public improvements have a right to demand protection against unslighty developments.

"Of course, there should be no censorship on personal tastes or ingenuities, assuming that these do not seem to be contrary to public interest.

"But that communities should protect their tax base, their generally good aspects, and their residential districts against blight seems clear enough."

The city of Wauwatosa was one of the first Wisconsin communities to take action along these lines. A public hearing at which the proposal was endorsed by many property holders and organizations resulted in the adoption of an ordinance by the council. The village of Whitefish Bay also enacted an ordinance which authorizes a special committee to pass upon residential buildings. The building inspector of this community has been instructed to refuse permits for buildings that are not in keeping with the character of the neighborhood and do not conform to existing residential structures.

Cities Urged to Assist Congress

In a message to the Annual Conference of the National Institute of Municipal Law Offices being held in Washington the week of December 3, Representative Albert Rains of Alabama urged that American cities and municipalities go into the "lobbying" business. Stating that there is a great need for "studious and eloquent expression" on the problems of cities presently being considered by Congress, Congressman Rains asserted that the average Congressman is deeply and sincerely interested in the wishes of his town and city; and that he desires local expression on pending legislation in order that he may represent the majority view. In conclusion, Mr. Rains stated that there was no one better qualified to advise Congress on pending legislation of interest to cities than the city attorneys themselves, and that it should be through their efforts that concerted and studied opinions be given to the Congress.

Eminent Domain vs. Individual Rights

EVIDENTLY, from the picture here, the city is taking the sick woman's house and the land on which it stands—or half of it—without her consent. Such a taking in civilized countries in times of peace can be made only by a "sovereign state" by virtue of its power of "eminent domain"—which has been defined as the inherent political right, founded on common necessity and interest, of appropriating the property of the individual without his consent, to be devoted by the state or by its authority, to some purpose for the welfare of the state and its inhabitants.

"This power," it has been said, *"is inherent in and essential to the existence of all government even in its most primitive forms. . . . Until, however, the rights of the individual as against the state began to be recognized it was not necessary to analyze the sovereign power, since every order which the government had the physical power to enforce was valid. At the approach of modern times, however, the rights of the individual began to be given more consideration." Our constitutions, national and state, did not need to give the government the right of eminent domain—it was theirs, inherently; but these constitutions did, for the protection of private rights, provide that no such taking should be made except for a public purpose, on payment of just compensation.

We may, therefore, be sure that this woman who owned the house was given due notice by the city of its intention to take the land; that the taking was for a purpose useful to the community—in this case for the purpose of improving the streets of the city; that she received just compensation in money for her property taken, or for such of it as, without being taken, was damaged; and that the judge gave her ample opportunity to move herself and her property out of the house before it was cut in two.

It seems strange that only half of the woman's house, and the land upon which it stood, was taken. It is true that the public authorities can condemn only what is needed for its purposes; but the need is usually broadly interpreted. Besides, in many states what is called excess condemnation is now allowed. In this way an entire lot can be taken to avoid the leaving of an undesirable remnant.

FRANK B. WILLIAMS

* "American Jurisprudence," Vol. 18 at p. 631.

PRESS ASSOCIATION, INC.

Mrs. Clara Casprzyk, a crippled widow, refused offers to move her dwelling to make way for street widening, and the village council in Silver Lake, Minn., ordered the house sawed in two.

Four Cities Act to Raise Housing Standards

ACTION has been taken recently to raise the standard of housing and to enforce existing housing inspection laws in Chicago, Baltimore, Milwaukee, and Denver, the National Association of Housing Officials reports.

A section on housing inspection and control was included in the Chicago charter of human relations adopted on November 6 by the Chicago Conference on Home Front Unity, composed of representatives of some sixty civic, church, labor and business organizations, and sponsored by the Mayor's Committee on Race Relations.

The housing inspection and control section, one of five sections in the housing chapter of the charter, states that:

1. A department of housing inspection, separate and independent from any existing department, should be established by city ordinance and that a minimum of 100 inspectors with adequate supervision be appointed to implement the functions of this department and that specific standards for the department be established.
2. A special branch of the Municipal Court be established to hear housing cases.
3. A unified and simplified housing code be established.
4. A permanent and realistic program of rat control to be set up.
5. The city council should promptly appropriate sufficient funds to implement the program.

Milwaukee's Health Department is just completing a survey of a sixteen block substandard area, using the appraisal technique developed by the committee on the hygiene of housing of the American Public Health Association.* When the survey is completed, the health commission will have a record of all housing code violators in the particular area studied. As the inspectors go about their survey, they issue peremptory "nuisance" orders which must be obeyed immediately. More far-reaching orders must await completion of the survey.

A housing law enforcement committee was appointed in September in Baltimore to study ways of checking violations of health, fire, and building regulations. Representatives of various city departments and the housing authority of Baltimore are on the committee which has already begun work.

A five-man board of review has been appointed by Denver's mayor to implement Denver's housing code, which was adopted in August 1944. Gradually the city hopes to eliminate all substandard dwellings, starting with the worst conditions first and then bringing all housing up to standard.

* See "Yardstick of Housing Needs," June 1945, pp. 96 and 149.

Neighborhood Planning and Maintenance

Better up-keep of residential properties is a community responsibility

THERE is a crying need to establish now, in the initial stages of the post-war building program, the means of insuring better maintenance of residential properties, declares *Tomorrow's Town*, publication of the National Committee on Housing, Inc. The November issue, which is devoted to a discussion of the maintenance problem, contains several thought-provoking suggestions.

Writing on maintenance as applied to the individually-owned home, Joseph H. Schulte, of Los Angeles, Director of the Research Division of the Fritz B. Burns Organization, says: "While all interests involved in the building boom which faces the United States are rightly concerned with provisions for well constructed homes in planned communities, there is another problem which must be met if premature obsolescence and blight are to be avoided. Unless these homes are adequately maintained they are going to become run-down in a short time, with consequent loss to the owner, the mortgagee, and the community. This can be overcome to a great extent by a sound maintenance plan."

To this James Felt, of James Felt and Co., Real Estate, New York City—who examines the problem from the standpoint of the multi-family rental property or apartment house—adds: "Our post-war housing program must go beyond the mere provision of shelter. If we are ultimately to avoid unnecessary financial and social losses it should provide well-planned, durable living quarters that can be maintained in sound condition for a long time to come."

Both of these contributors to the discussion point out that good maintenance involves (1) good planning and the selection of durable materials and equipment in the beginning, (2) the establishment of more effective controls to insure proper maintenance afterward. The latter is the major difficulty, for it involves overcoming the ignorance and carelessness of many home owners and the tendency on the part of too many owners of rental housing to "milk" their properties as their financial stake decreases in relation to the entire capital structure.

Both contributors charge the community with a share of responsibility for encouraging proper maintenance of residential buildings and believe the real answer lies in the establishment of a maintenance reserve fund. Mr. Schulte believes the maintenance cost of individually-owned homes should be borne by the owner directly or through community associations, with contributions from the land developer and from the manufacturers and distributors of materials. Mr. Felt believes that the same sort of cooperation among lending agencies which has resulted in higher standards of design and construction can be effectively used in collaboration with the title owner to set up a maintenance reserve fund for rental property and see that it is properly used.

In summation, the editors point out that whether one agrees or disagrees with the method suggested, it is high time to do something about the failure of so many property owners to protect their own investments. Careless maintenance of individual properties is one of the contributing factors to urban blight, and we can no longer afford to let the other fellow wreck his home lest in the process he wreck ours also.

These cartons from Tomorrow's Town *are a dramatic warning of the consequences to a neighborhood of short-sightedness and neglect and the need for public action.*

Operation Prescribed—But Who'll Do the Cutting?

Pulling Them All Down

The Red Cross and the Local Community

Parties like this rodeo for patients of the Dibble General Hospital in Menlo Park, Calif., are a welcome community contribution to the Red Cross peacetime program

RED CROSS PHOTO BY RIORDAN

This Gray Lady at Halloran General Hospital, Staten Island, N. Y., is one of many throughout the country who are continuing their Red Cross volunteer work with the veterans

THE END of the war has brought a new challenge to the American Red Cross for urgently needed service by its local chapters in communities of every size throughout the country. And community projects already under way to assist the returning veteran and the hospitalized servicemen point toward continued cooperation in solving many war-related peacetime problems.

Learning to Help Veterans

Returning veterans, many of whom are physically handicapped or emotionally scarred by battle, need help and advice in adjusting themselves to civilian life. An institute on personal and family problems, like that sponsored by the Red Cross in Indianapolis, is one effective way of meeting that need.

Designed primarily for employment personnel, labor relations personnel, veterans' counselors, and other representatives of business and industry who are or will be dealing with large numbers of veterans as employees, the institute also included labor union officials, representatives of veterans organizations, and leaders of the community welfare and health agencies. A dramatic highlight of the institute, which gave the civilians an unusual insight into the procedure used with veterans, was the presentation of the official one-hour orientation course given all soldiers before they are discharged.

Cooperative Recreation Programs

Communities having within their limits or nearby a large military or naval hospital find additional opportunities for service through the Red Cross program. On the San Francisco peninsula, residents of several communities around Dibble General Hospital in Menlo Park, Calif., provide outings for patients, arranged through their Red Cross chapter.

One of the most successful of these was planned by the owner of the HH Ranch up in the hills whose ranch was used as a Dog Reception Center for the Army K-G Corps. When the ranch was turned back to its owner, he found himself the possessor of a large recreation hall. Through his Red Cross chapter he arranged for parties for the patients at Dibble General Hospital, and the result has been a welcome succession of rodeos, hayrides, square dances, horse shows, all arranged with the cooperation of local business and organizations. One donates the public address system used at parties; another provides entertainers; local women cook and serve food.

Other communities throughout the country are working on similar projects, and members of all are giving time, money, and effort. Their contribution is urgently needed, as the Red Cross faces increased demands upon its resources, both overseas and here at home.

An Appeal to Municipal Officials

THE spectacular war work of the American Red Cross has overshadowed its regular peacetime activities. Few communities are sufficiently aware of the great benefits they receive from the continuing services of Red Cross.

The Safety Services in themselves—Accident Prevention, First Aid, and Water Safety—would be sufficient reason for financial support, but they are but a fraction of the local chapter programs which include classes in Home Nursing and Nutrition, the work of the Junior Red Cross, and—most important of all—Home Service and Disaster Preparedness and Relief. The Home Service work for service and ex-service men and women and their families will carry a high load of work for years to come. The Disaster Committees, which all chapters are required to keep up to date, will continue to prove invaluable in every state of the Union.

All this is aside from the continuing work in hospitals, governmental and private, the overseas program for our own men and women, foreign relief, and a host of other services rendered by A.R.C.

Your local Red Cross is one of your community's most valuable assets: it should have the intelligent support it deserves. An immediate opportunity for effective help from municipal officials and other readers of THE AMERICAN CITY is afforded by the Fund Drive which starts on March first. To keep an active, well-financed chapter is to promote local welfare work of the highest order, as well as to play your part in the national and international humanitarian work for which the Red Cross is so justly famous throughout the world.

More Fire Alarm Boxes–a Current Need

Rarely have cities been in a better financial condition to install the boxes to complete their fire alarm systems

By F. B. PHILBRICK
President and General Manager
The Gamewell Company
Newton Upper Falls, Mass.

MUNICIPAL signal engineers, with the return of peace, are faced with problems quite different from those previously encountered. Due to sub-normal municipal appropriations for the maintenance and expansion of their signaling system during the ten years immediately preceding the war and the rigid military control of critical materials during the ensuing five years of war, an accumulation of deficiencies now exists that prevents these systems—through no inherent fault of their own—from delivering the full measure of protection of which they are capable.

Municipal officials and citizens recognize the need for effective fire fighting equipment, for a capable and alert fire department, and for an adequate water supply; but too frequently they overlook the fact that these agencies are powerless to control the fire loss when fires are permitted to gain headway before the alarms are given. As a consequence of this oversight, delayed alarms continue to be responsible for a large percentage of the excessive fire waste.

Savings to Community

Municipal administrations generally endeavor to give their citizens the benefit of public improvements for which there is the most insistent popular demand. In many instances these are the more spectacular projects that can be seen and admired. Now there is nothing spectacular in the appearance of a fire-alarm box on a pole, an underground wire, or a register in a fire station, yet if these instruments are available and brought into action soon enough, many incipient conflagrations will never make front page news even in the local newspapers. Furthermore, the resultant savings to the community will be sufficient to justify the acquisition of the more spectacular improvements.

The N.F.P.A. standards of fire alarm box distribution generally prescribe that a citizen shall not have to traverse, in order to send an alarm, more than three hundred feet in congested high-value districts; not more than five hundred feet in built-up residential districts; and that a box or boxes shall be located near all important buildings in the more sparsely built districts. The Underwriters' report on your respective cities will show, in many cases, that your city has been credited with *relatively good box distribution in the congested high value district.* Where, then, do the deficiencies exist and the very large percentage of the excessive fire waste come from? The waste is in the poorly protected, closely built residential districts and the sparsely built districts. In the districts there are annually reported some 340,000 residential fires, 29,000 factory fires, and 12,000 public building fires in schools, hospitals, etc., nearly all of which are outside of the generally well protected, congested high-value districts. An extensive and thorough survey of a number of congested, high value municipal districts indicates that boxes are almost invariably used to report actual fires occurring in such districts and that, in the aggregate, the losses are relatively light—you can check this with the fire loss experience in your own cities.

Let us analyze the box distribution in twenty typical cities with populations ranging from 55,000 to 900,000. The average area is 32.15 square miles with average built-up area of 20.25 square miles. Box distribution in these cities runs from a minimum of 5 per square mile to a maximum of 18 with an average of 12.2 per square mile. Reasonably good box distribution should be several times this figure, adjusted of course to local conditions.

That the deficiencies are widespread is indicated by the fact that only seven of the 412 cities of 25,000 population and over have been accorded a Class No. 1 rating for the fire alarm factor by the National Board of Fire Underwriters, and only 142 additional cities have achieved even a Class 4 or better rating. With a distribution of alarm boxes ranging from only 5 to 18 boxes per square mile in built-up areas, what chance has the average citizen to find a box when he needs one?

Visibility Needed

In many cities the sparse distribution of boxes is accentuated by lack of visibility, especially at night. Practically, if a citizen cannot find a box when he needs one the box might as well not be there. Some 354 of our largest cities were checked to ascertain the visibility ratings accorded by the Underwriters, with the following results:

Good—Comply with Standards	18 cities
Fair—Conspicuous in daytime only	151 "
Poor—Inconspicuous at all times	185 "

We are now entering a period during which the waste of war must be offset by a peacetime economy in which no latitude should be allowed for a continuation of the waste by fire. The mass production under high pressure to meet the pent-up demands for civilian goods will contribute to increased fire hazards, and it is essential, in the interest of our respective communities, that every factor in the municipal fire defenses be strengthened without delay.

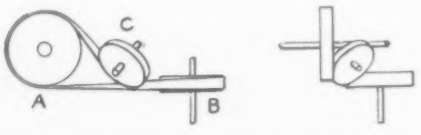
Fire alarm is properly rated as a major factor in the active fire defenses —it is accorded third place by the Underwriters—ranking next in importance to the extinguishing agencies themselves.

Quarter-Turn Belt Drives Short-Center

DO YOU know the rule that applies to quarter-turn as well as to all other belt drives? This is it: "As the belt leaves any pulley, its center must lie in the plane of the pulley it approaches." Nevertheless, where pulleys are close together, a quarter-turn drive may often make it difficult to keep the belt on the pulleys.

This sketch shows how to take care of such a drive by means of guide pulley C placed between pulleys A and B. Place it in such a way that as the belt leaves either pulley A or B its midpoint lies in the plane of C. A study of the sketch shows how this can be done—a single line being tangent to the three pulleys.

Thus the conditions of the transmission rule are thereby fulfilled for either direction of travel of the belt. In other words, this quarter-turn drive is "reversible."



Belt drives work correctly if, as the belt leaves the pulley, its center lies in the plane of the pulley that it approaches as illustrated here

IMPORTANT! NEWS — for every FIRE DEPARTMENT!

M·S·A Announces . . .

THE REVOLUTIONARY M·S·A Chemox SELF-GENERATING OXYGEN BREATHING APPARATUS

Generates its own oxygen as you breathe—in the amounts you need—giving you *one hour's* protection in unbreathable air, using a replaceable chemical canister! Weighs only 13½ lbs. complete. No cylinders, high-pressure valves or fittings. Fog-free lenses. Absolutely simple to use. Proved by Navy battle service all through the war! Write now for Bulletin BM-8, and an actual demonstration.

ONE REPLACEABLE CANISTER DOES THE WHOLE JOB!

AND

THE M·S·A DEMAND-TYPE OXYGEN MASK

Built to high standards of construction and dependability, this extremely simple M.S.A. Oxygen Mask operates on the demand principle—supplying oxygen direct from refillable cylinder, for one-half to one-hour period. No special training required—facepiece has quick-disconnect fitting to conserve oxygen during standby periods—no lens fogging. Write for Bulletin BM-7. Demonstration gladly arranged.

JUST PUT IT ON—OPEN A VALVE—AND BREATHE!

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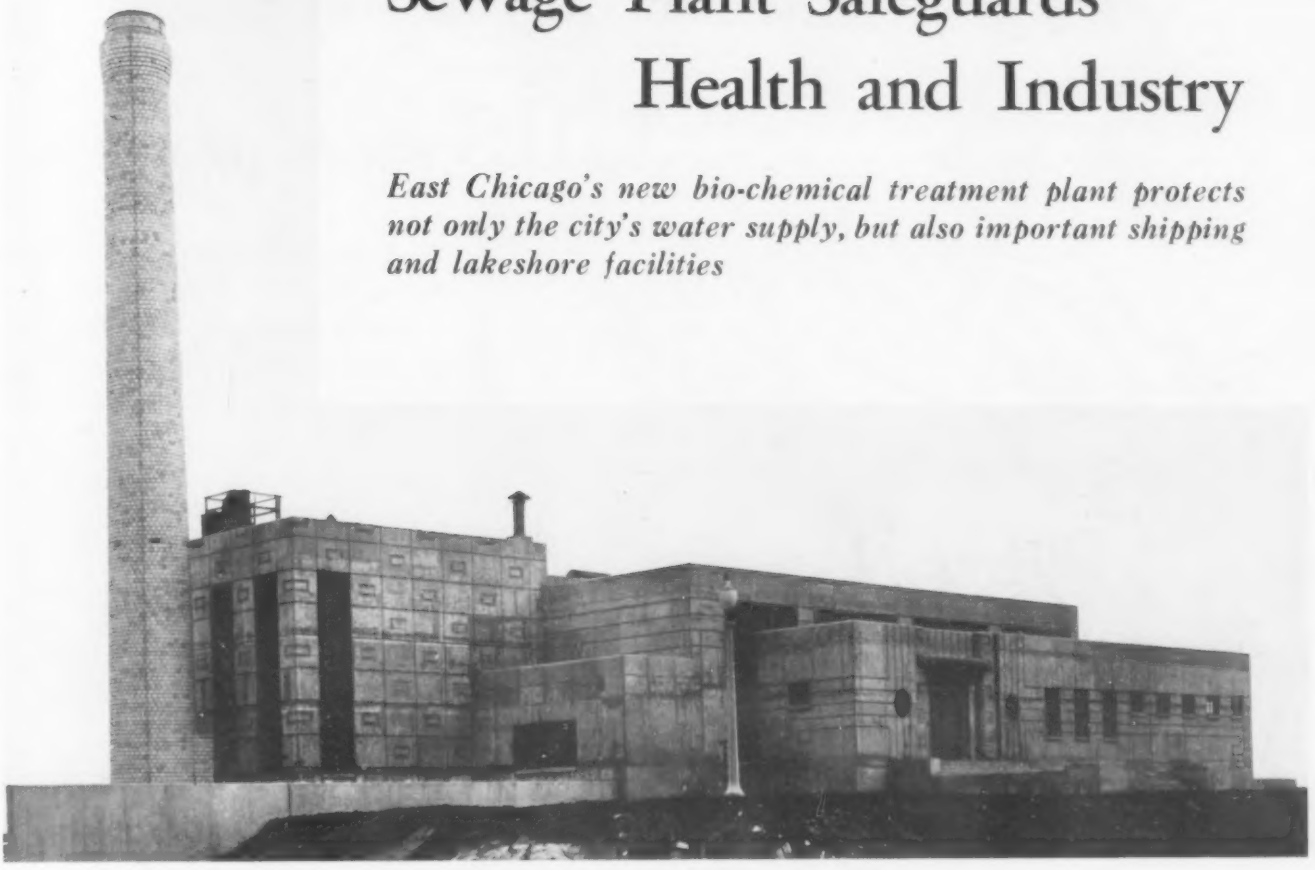
BRADDOCK, THOMAS AND MEADE STREETS PITTSBURGH 8, PA.

District Representatives in Principal Cities

Sewage Plant Safeguards Health and Industry

East Chicago's new bio-chemical treatment plant protects not only the city's water supply, but also important shipping and lakeshore facilities

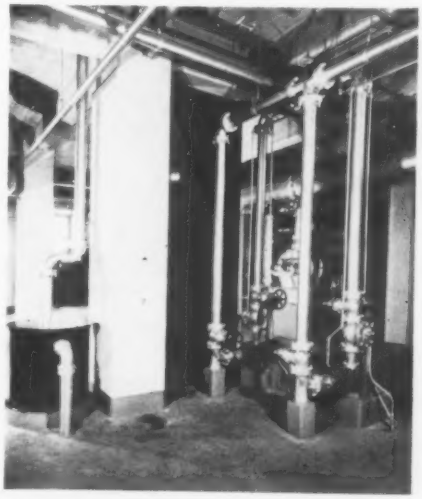


The filter and incinerator building at East Chicago, Ind.

EAST CHICAGO, Ind., didn't need the stern admonitions of neighboring downstream communities to persuade her to build an up-to-date sewage treatment plant. She didn't need it because there aren't any communities downstream. East Chicago is it.

This community of close to 55,000 located on the southerly shore of Lake Michigan, is friendly to industry. Fifty-three different industrial concerns ranging all the way from the giant Inland Steel to small one-building shops line the shipping canal that cuts through the city, in order to take advantage of the low cost water shipping facilities that combine with rail transportation at that point, and when it became necessary to treat the wastes from these industries, the city took over the job without complaint. Since the Indiana Harbor Canal and the Calumet River both carry shipping, the designers recognized how imperative it was that the channel should not be obstructed by sludge. They also realized that because East Chicago draws its drinking water from a point not far from the outlet of the Harbor Canal as it empties into Lake Michigan, it was imperative that the degree of treatment given the discharged effluent, even though free from a sludge, be great enough to reduce danger to the water supply to the minimum. There had been some effort made to minimize this danger by extending the water inlet further into the lake, however, this had its practical limits which officials in the city recognized.

The plant that the city built and now has put into use has a 20-mgd hydraulic capacity and utilizes the Guggenheim bio-chemical process. Test runs indicate that when the plant is in smooth operation and all units have been coordinated, the treatment will reduce the 5-day BOD count and the suspended solids by 90 to 95 percent. The plant is compactly designed, and its hydraulic arrangements shows careful thought.

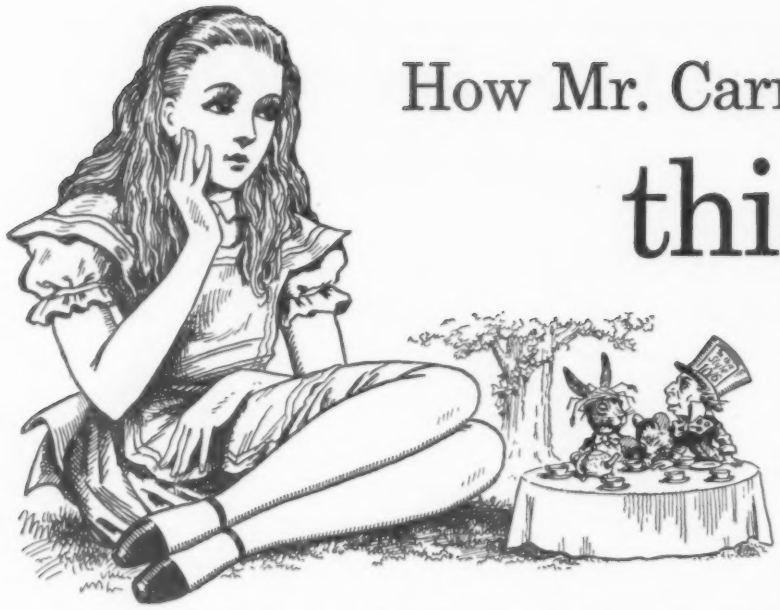


View shows two Nash-Jennings filtrate pumps, bottom of the Eimco bucket elevator casing, and moisture trap seal tank in the basement of the plant directly below the mix tank

Treatment Process

The sewage enters the plant through force mains that raise it to an elevation high enough to allow flow through the entire plant by gravity. A pair of Chicago Comminutors give the first treatment. These 20-mgd units shred large particles making the character of the sewage more consistent and easy to handle. However, the sewage can bypass these if necessary, flowing through a manually cleaned bar screen with ¾-inch openings.

After treatment by the Comminutors, the sewage passes into a 30-foot square Dorr Detritor that removes the heavier inorganic solids. It then passes through a 60-inch pipe to the primary digestion well and then to three Dorr primary settling tanks. These tanks



How Mr. Carroll solved this space problem

Alice was much too big to fit in Wonderland. So Lewis Carroll, the author, solved this space problem by making her drink a shrinking potion labeled "drink me". Simple as that.

How Microfilm-by-Microstat helps Municipalities solve THEIR space problem

IN an equally simple way, more than 2,200 leading firms solve their space and safety problems (filing and storage) through microfilming by York Microstat —which "shrinks" their records over 98%. The famous Microstat J-7 Camera, world standard in fidelity, has microfilmed untold millions of documents and engineering drawings.

Soon, American business will see Microstat's revolutionary Fassel Microfilm Camera in a form so compact, so advanced in performance that many thousands more firms will be able to enjoy the space reduction and record preservation advantages of microfilming.

The Fassel Camera, world's *first and only proven flow film camera* that "shoots" both front and back of documents simultaneously, *has been performing for five years* at the home office of a prominent mid-western insurance company. This double-action principle is a patented feature of the Fassel Camera.

What the Amazing Fassel Camera Does

1. Automatically photographs both sides of a document simultaneously and, as a result of a patented off-set slot arrangement, there is no overlapping of pictures. *Only the Fassel Camera has this* "no-bleed" *feature.*

2. A simple lever shift enables both single and double-sided copy to be photographed on a *single roll of film without interruption.*

3. Automatically microfilms over 10,000 papers, average size, in an hour. And both sides are photographed!

4. Takes single sided documents up to 18" wide.

5. The Fassel Camera guarantees absolute precision because of a 15-point inspection, positive vibration control and Variac System which provides the right light for every piece of copy.

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The compact, portable Fassel Camera will be available to Business the world over in just a few months.

Wait until you see the Fassel Camera before you make any commitments for flow camera work. You'll save time, space, money, needless risk; for *only the Fassel,* among two-sided flow film cameras, *is proved by use.*

In the meantime, if you have engineering drawings or documents to be microfilmed, let Microstat's precision J-7 do it for you. And remember, with both J-7 or Fassel work, there is Microstat's original insurance policy which guarantees replacement of any lost, destroyed records with actual size facsimiles without cost. Insures you for ten times the cost of microfilming.

York Microstat experts know the problems of Municipal record-keeping—can advise what records profitably can be microfilmed.

Write or phone us for further information which will be furnished without obligation, of course. Address Department M.

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are designed to retain the sewage for 1.5 hours; each has a capacity of 320,000 gallons.

The effluent from these tanks then goes to two aeration tanks, each with a capacity of 509,000 gallons. These apply air at the rate of 3,470 cubic feet per minute and retain the sewage for two hours. It is at this point that the design calls for the application of secondary return sludge in an amount of 20 percent of the volume of flow and Ferrisul applied at the rate of 3 ppm. The aerated sewage then proceeds to the three final settling tanks, each with a capacity of 470,000 gallons, where it is detained for 1.7 hours. The finished effluent is then discharged into the Calumet River.

Plant equipment includes a pair of Wallace & Tiernan chlorinators that can be used to chlorinate the final effluent, although operation at present has not required their use.

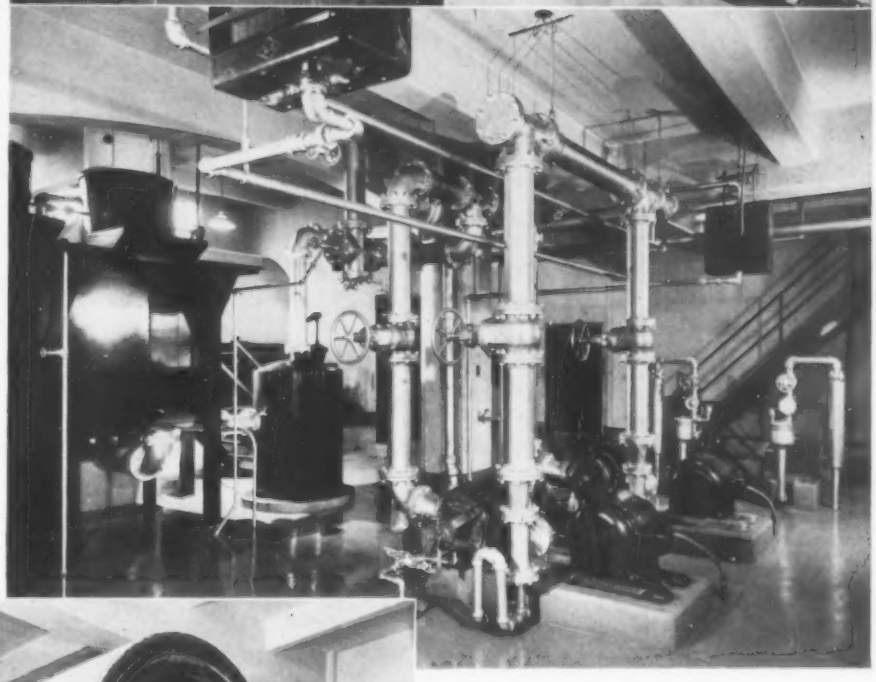
Sludge from the primary tanks is drawn off into a 500,000 gallon sludge storage tank and then transferred to the vacuum filters after first receiving ferric chloride and lime for conditioning. There are two of these filters, each is an Eimco and measures 8 feet in diameter and 10 feet in length.

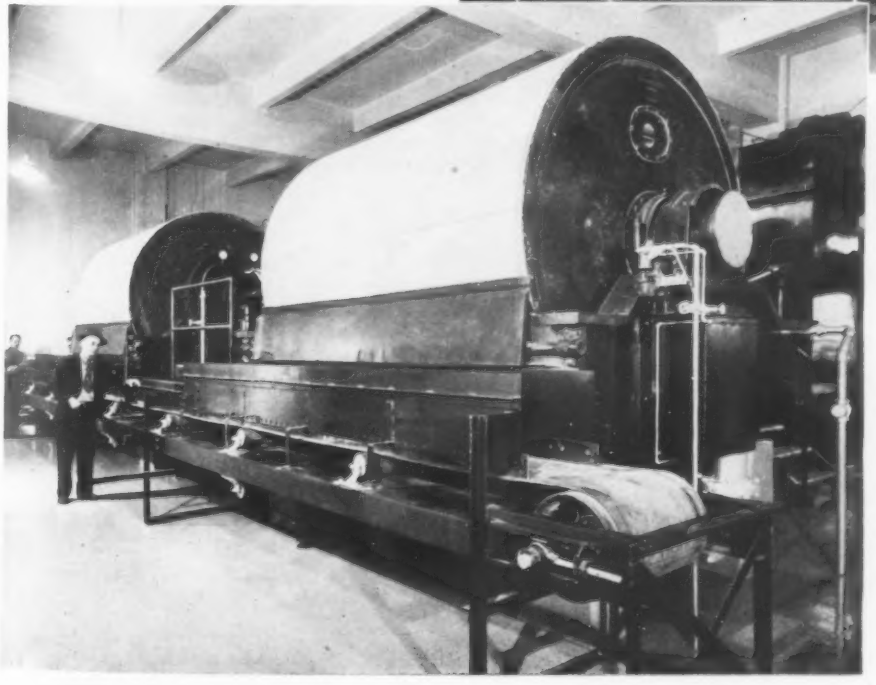
The dewatered sludge then is conveyed to a Nichols Multiple Hearth incinerator for final destruction. This incinerator has a capacity of reducing 1,750 pounds of dry solids per hour and will destroy sludge with a moisture content as high as 75 percent.

All sludge from the secondary tanks returns to some point in the plant process. Chicago Scru-peller pumps move part to the aeration tanks, and part to the primary settling tanks where it is withdrawn with the primary sludge.

The plant originally was intended to be constructed out of WPA funds with a contractor retained for supervision and furnishing equipment. However, before construction was complete, this WPA support was withdrawn and the city was faced with the extremely difficult task of completing construction in the face of wartime restrictions and manpower shortages. These difficulties have now been overcome with a great deal of help from Mayor Frank J. Migas and the plant has been in full operation since about June of last year.

The plant is under the control of a Board of Sanitary Commissioners which includes J. Steiner, City Engineer; A. G. Giannini, and M. Mysliwy. Stephen Levan is Superintendent.





TOP: *The dewatered sludge goes up this inclined belt conveyor and drops into the Nichols incinerator. The feeder is built so that if desired the incinerator can be by-passed and the sludge can be loaded directly into trucks.*

ABOVE: *On the east side of the main feeder floor are two Nash vacuum pumps, two blowers, and a chemical feeder used in connection with the vacuum filter operation.*

LEFT: *Superintendent Stephan Levan examines his two Eimco vacuum filters and the conveyor belt used with them. Notice on the end of the filters the automatic float control mechanism for controlling the speed of the elevators and supply of sludge to the filter. These are part of the vacuum filter installation*

A Tocco induction heat-treating machine for hardening track shoe pins in the Oliver "Cletrac" plant.

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Quality is fundamental to every production step in the modern Oliver "Cletrac" plant . . . in materials, workmanship, and equipment.

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The Foreign-Trade Zone and Post-War Competition for World Trade

By ABRAHAM WEINMAN
Legal Staff
Department of Investigation
New York City
(On military leave)

THE end of the war brings increasing attention to one of the most recent United States commercial innovations, the Foreign-Trade Zone. The zone is destined to play a major American role in post-war world trade, and the experience of New York's zone demands critical appraisal by other ports of the immense advantages to be derived from free port facilities. The spade-work is completed. The harvest to be reaped by port cities will repay the small effort required.

What Is the Foreign-Trade Zone?

Back in 1913 the Merchants' Association of New York (now the Commerce and Industry Association) sponsored legislation designed to create a foreign-trade zone (or free port) in this country. The practical value of a free port lies in the ease with which foreign commerce can be carried on without red tape. Within the zone area customs duties, ordinarily payable upon entry, are suspended until the cargoes actually enter the country elsewhere. If they are re-exported or transshipped from the zone to a foreign country no customs bond or duty is required.

Local and national chambers of commerce, shipping interests, commercial periodicals and the United States Tariff Commission were quick to see the inherent advantages in such a system. But a declaration by a House Ways and Means Committee in 1919 that the plan raised serious constitutional questions of port preference set back the plan.

When, however, in 1933 the proposal was renewed, there were few dissenting voices. Designed "to expedite and encourage foreign commerce," and "to foster the dealing in foreign goods that are imported, not for domestic consumption but for re-export, to foreign markets and for the conditioning or combining with domestic products previous to export," the bill was passed.

New York in the Vanguard

The removal of customs restrictions and formalities in European free ports had proved a vital foreign-trade stimulant. As far back as 1876 Genoa had adopted the plan, and prior to the outbreak of World War II at least 43 foreign ports had established free zone facilities for the purpose of encouraging manipulation and transshipment of cargoes through these ports.

New York's Mayor LaGuardia was quick to see free port advantages and he applied for the establishment of the first United States Foreign-Trade Zone at Stapleton, Staten Island. His application was approved on January 30, 1936, and there began the experiment by which the value of zones to this country was to be proved.

A Business Partnership

Operated directly by the city of New York, the progress of the zone was slow for a variety of reasons that revolve around legal limitations upon particular municipal expenditures. These included prohibitions against financing shipments, advancing moneys against bills of lading, engaging in promotional plans, and other related problems. The early false start was quickly remedied. As a guide to other cities which study the problem, it is invaluable.

Private interests were invited to submit bids for operating the zone and a corporation known as the Foreign Trade Zone Operators, Inc. was the successful bidder. Under the general supervision of the New York City Dock Department (now called the Department of Marine and Aviation) the new zone operator began his activities in the summer of 1938. He soon vindicated the position of all zone supporters. The employment figures, lighterage, trucking, and steamship business, occupied zone space, and financial benefits to the city became a striking testimonial to the principle of the Foreign-Trade Zone.

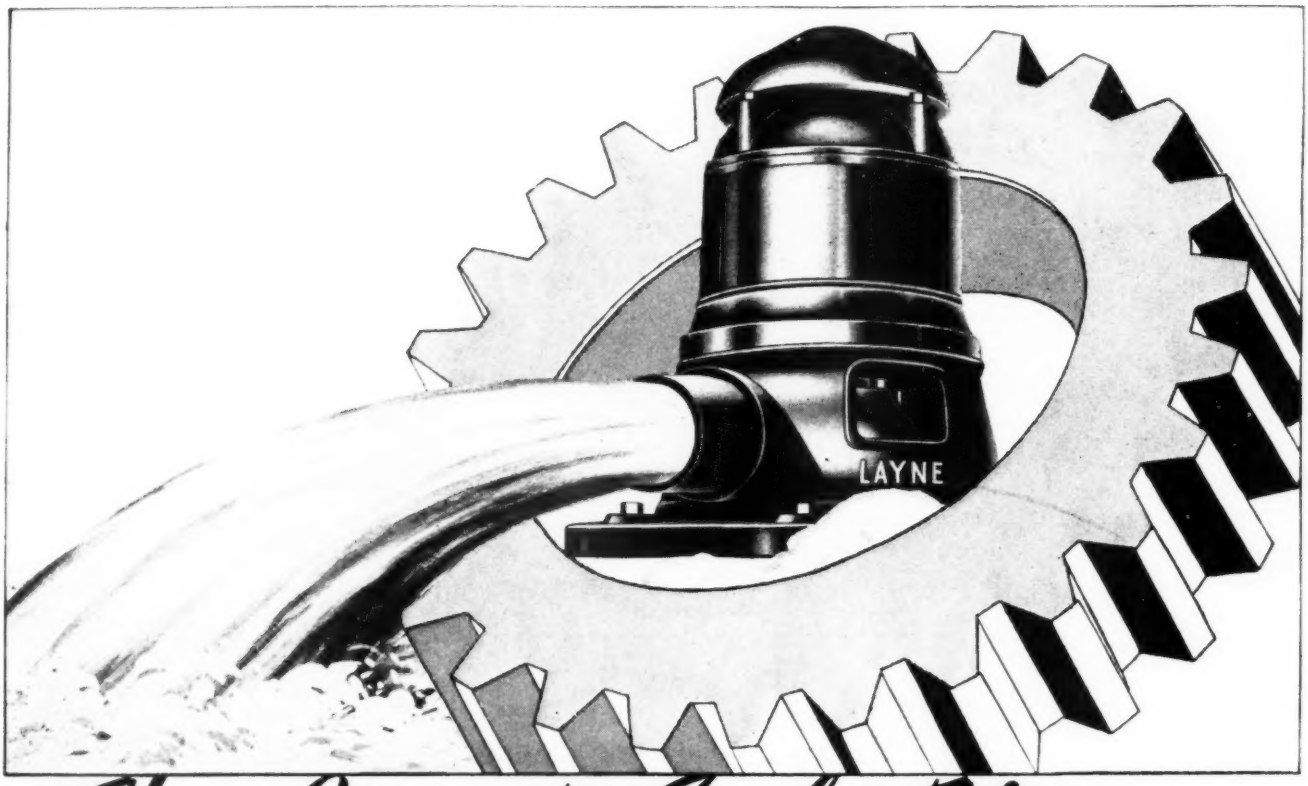
The Army Takes Over

When this country entered the war most of the zone's facilities were quickly taken over by the United States Army. Because the Staten Island location was ideal and had been carefully developed for security purposes, it became an important center for military operations. Zone operations did not cease, however. Most of them were temporarily transferred to other piers on the North River. Both the federal authorities and local officials realized that so important a port facility ought not to be abandoned. This was not an ostrich-like "business as usual" policy. Post-war strategy demanded that the free port be in practical operation when the markets of the world reopened.

The post-war foreign markets in South America will obviously be

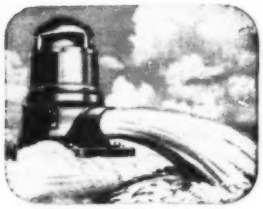
PHOTO COURTESY N. Y. FOREIGN-TRADE ZONE OPERATORS, INC.

Docks and warehouses in the New York Foreign-Trade Zone



The Biggest Industries

PREFER LAYNE WATER SYSTEMS



The modern industrial plant engineer is quick to show his preference for a Layne Water System. He knows—usually from first hand experience—that Layne Water Systems have many outstanding points of superiority. He knows that they produce the most water—at the lowest cost—and continue to give peak performance for years after other systems have failed.

Layne Water Systems can be bought for any capacity needed, from a few thousand to millions of gallons of water daily. But regardless of size, each will have the same high ratio of efficiency and the same long years of life. Furthermore, Layne engineers often obtain and produce more than an adquate supply of water in locations where others have failed.

Layne offers industrial plants the benefit of their long years of experience in planning water systems. An experienced engineer is available to study your problems and make recommendations —without obligation. For late literature, address Layne & Bowler, Inc., General Offices, Memphis 8, Tenn.

HIGHEST EFFICIENCY

Layne Vertical Turbine Pumps are now available in sizes to produce from 40 to 16,000 gallons of water per minute. Their high efficiency saves hundreds of dollars on power cost per year.

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WELL WATER SYSTEMS
VERTICAL TURBINE PUMPS

enormous, and competition for them keen. The competitive advantages of free port terminal facilities have been proved in New York and foreign ports. They are vital inducements to foreign trade and shipping. They are expected by foreign merchants. Why, then, have cities in this country closed their eyes to this really important development in recent maritime history? New York's experience indicates the immediate need of several such zones throughout the country. A larger part of the maritime commerce of the world than we have up to now received can be expected to flow through these ports if they are strategically located on the Pacific Coast and at Gulf Ports.

In 1939 the Commissioner of Investigation and the Commissioner of Docks in New York City conducted a joint survey of the administration of the Foreign-Trade Zone. In their report to Mayor LaGuardia, findings were made which ought to encourage other ports to follow the New York lead without further hesitation. The investigators reported that:

"The zone has definitely established its value as a means of promoting trade and commerce both for the city of New York and the nation in general. It has brought new trade to the city and country. It has prevented the diversion or loss of trade from the city of New York to other ports. The increase of trade and commerce brought about by the zone cannot be attributed to general import and re-export trends."

Although the major zone activity is lessening the red tape in connection with re-export, transshipment, and manipulation of dutiable commodities, it was found that certain other operations were peculiarly suited for zone functions. Procedural advantages in determining the dutiability of merchandise before shipment into customs territory,* as with medicinal oil vitamin potency, permissible exhibition of merchandise, opportunities for the reduction in proof and bottling of liquor imported in bulk, sorting operations—providing facilities for these activities is not a usual zone function, but nevertheless serves to bring business to the port having a free zone. If the ports of the United States do not have facilities for these operations, foreign merchants will go to the ports that do have them.

There should be no hesitation by cities because of fear that zone facilities may compete with private warehouses. The zone competes with foreign ports, not with local terminal facilities. The study by the Department of Investigation and the Department of Docks proved clearly that local warehouses were not suffering from zone competition. The facilities offered are different in nature, and the presence of the zone is of financial benefit to both interests. The zone has attracted to the Port of New York types of merchandise which had never entered through the port prior to the creation of the zone. It has, on the other hand, arrested the flow away from New York of other merchandise. Its benefit to local banking and insurance organizations is obvious.

Zone's Permissible Operations

Cities interested in the creation of a zone will find the following merchandise movements authorized:

1. Domestic merchandise designed for domestic consumption; for example, temporary storage of household goods

2. Domestic merchandise designed for coastwise shipments and entered into this country; for example, household goods shipped from Staten Island to Florida by steamer

3. Domestic merchandise to be stored before export; for example, American trucks and planes

4. Foreign non-dutiable merchandise for domestic consumption; for example, wood pulp

5. Foreign non-dutiable merchandise designed for domestic consumption, but to be manipulated during storage with dutiable merchandise; for example, medicinal oils

6. Foreign non-dutiable merchandise designed for domestic consumption, but to be manipulated with non-dutiable foreign goods; for example, medicinal oils

7. Foreign non-dutiable merchandise to be transshipped after storage; for example, lift vans

8. Foreign non-dutiable merchandise to be transshipped after manipulation; for example, chick peas

9. Foreign merchandise whose character must be ascertained before its dutiable or non-dutiable nature is determined; for example, fish liver oil

10. Foreign merchandise that is dutiable and designed for domestic consumption after storage; for example, furs

11. Foreign merchandise that is dutiable and designed for domestic consumption after manipulation; for example, spirits

12. Foreign merchandise that is dutiable and designed for transshipment after storage; for example, istle

13. Foreign merchandise that is dutiable and designed for transshipment after manipulation; for example, cameras, and the assembling of Swiss watch movements with domestic cases.

This bird's-eye view of zone operations, when compared with a municipality's or port's ordinary and usual warehousing operations without the benefit of zone activities makes imperative further inquiry by progressive local officials as to the conversion of some of their own port facilities for zone purposes. Their inquiry will be well repaid from the local point of view, and as an aid to attracting foreign cargoes to American ports after the war. The free port is invaluable. We have the shipping to compete successfully for post-war world trade. Local industry and local government can create the terminal facilities that are a necessary concomitant. The experience of New York is a compelling reason for other American ports to follow this example. And the time is now!

* In 1941, the last pre-war year of normal zone operations, $2,867,352 had been collected at the zone by way of customs duties. Even in the war year 1942 duties collected amounted to $1,998,851, and foreign goods exported through the zone in that year was close to $13,000,000.

School Systems Are Part of Municipal Government in 144 Cities of Over 25,000

SCHOOL systems are operated as part of the municipal government in 144 cities, or 36 percent of the 397 cities of more than 25,000 population, the International City Managers' Association reports.

In these cities the school budget is part of the general municipal budget and is subject to control by the city council. The mayor generally appoints the school board.

In the majority of the remaining cities of over 25,000 population, the schools generally are operated by a separate board elected by the people. The school budget is separate from the city budget and the city council has no control over the budget or the schools.

Cities of over 25,000 population in nine states have integrated the school system with the municipal government with the following exceptions: Connecticut, except Middletown and Stamford; Maine; Massachusetts; New Jersey, except Belleville and West Orange; New York, except Jamestown and Newburgh; Rhode Island; Tennessee; Virginia; and Wisconsin. Schools in North Carolina are operated by the state, cities making supplementary expenditures. Local systems in a few cities in other states are integrated with city government: Wilmington, Del.; Washington, D. C.; Columbus and Rome, Ga.; Louisville, Ky.; Baltimore, Md.; Detroit, Mich.; St. Paul, Minn.; Abilene, Dallas, Laredo, and Tyler, Texas; and Burlington, Vt. School systems in Columbus and Rome are considered as part of the city largely because of the practical impossibility of separating school data from city data.

Long life and low annual maintenance cost provide the true index to economy in underground mains. With these factors assured, as in U. S. Cast Iron Pipe, a higher *first* cost is soon offset by *low cost per service year.* Ultimately, the difference in initial investment is paid for many times over in savings and service to the community. This is a matter of record, not conjecture, which can easily be verified by economy-minded officials.

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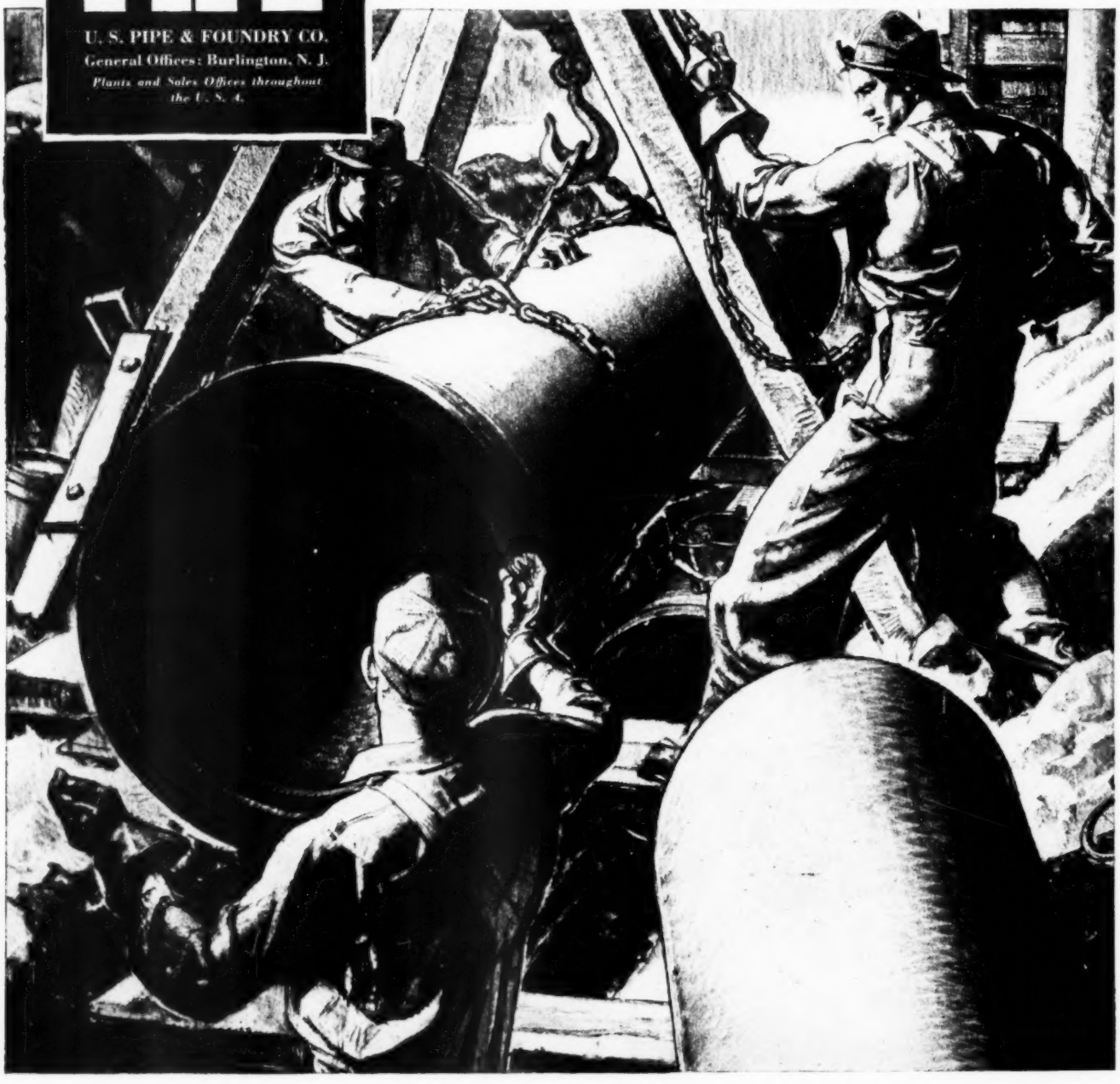
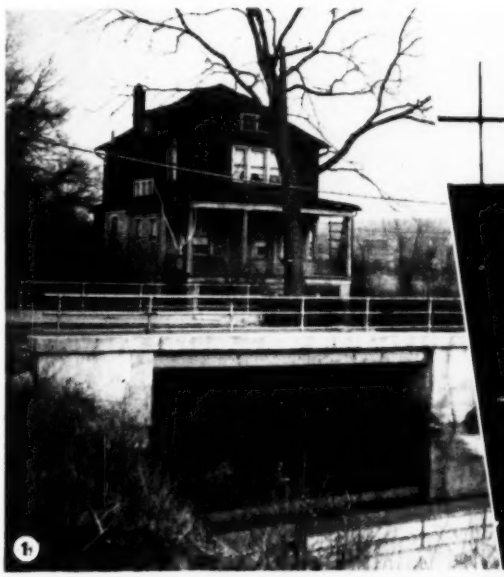
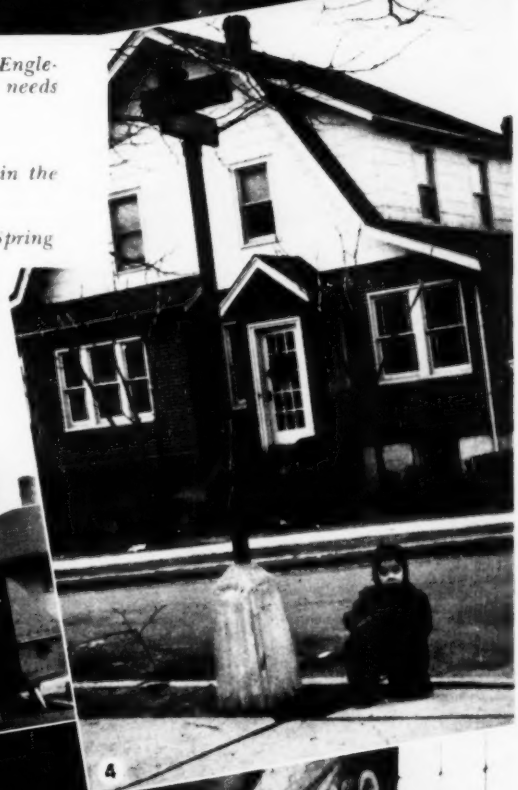


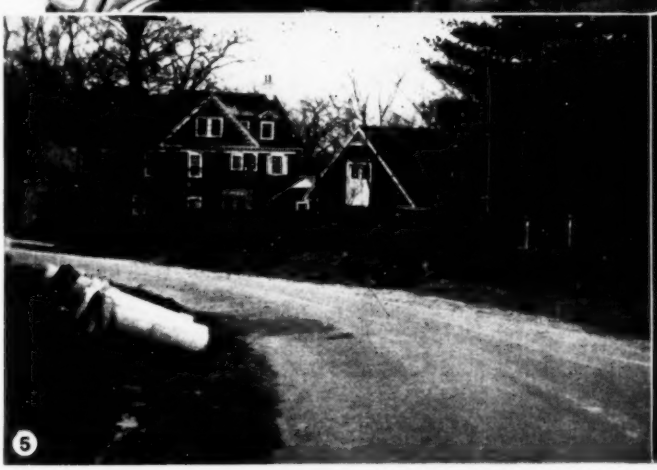
Street Department Notes

From Englewood, N. J.



1. *This is the type of project that G. Russell Hartley, veteran City Engineer of Englewood, N. J., plans to attack during the coming season. The bridge is narrow and needs a larger span in order to accomodate the flow of water under it.*
2. *The efficient Gutter-Snipe street sweeper holes up during bad weather.*
3. *Engineer Hartley keeps his Barber-Greene snow loader handy.*
4. *Do you know why this street sign has such a heavy concrete base? The dogs in the neighborhood can tell you how it simplifies maintenance.*
5. *A little storm sewer project in the residential portion of Englewood.*
6. *The Rex two-bag mixer and a supply of Lehigh cement await the coming of Spring*





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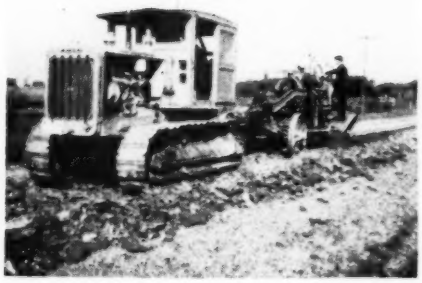
With the Barrett Tarvia* method of *base stabilization* you can build long-lasting, safe and efficient modern highways at remarkably small cost.

The method is simple and does not call for any special skills or equipment.

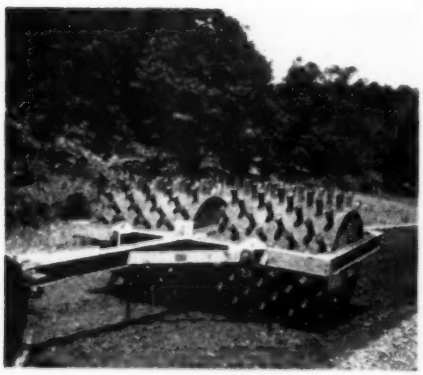
A booklet describing the process in detail is yours on request. Or ask the Barrett field man to check over with you the things that can be done *now* in order to be ready for the spring construction season.



1. Loosening and Pulverizing with Blade Grader.

2. Applying Tarvia to Pulverized Soil.

3. Mixing Tarvia and Soil.



4. Consolidating with Sheepsfoot Roller.

5. Final Rolling with Flat Wheel Roller.

6. Applying Tarvia Tack Coat.

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Housing Administrator Enlists Aid of Municipal Organizations

FORMER Mayor Wilson W. Wyatt, of Louisville, Ky., the Housing Expediter* in the office of War Mobilization and Reconversion, met on January 15 with representatives of the United States Conference of Mayors and the American Municipal Association to enlist the continued support of these organizations and receive suggestions for alleviating the housing crisis.

Present at the meeting were Mayor Edward J. Kelly of Chicago, Ill., President of the U. S. Conference of Mayors; Mayor Earl Riley of Portland, Ore., President of the American Municipal Association; Mayor Woodall Rogers of Dallas, Texas, Vice-President of AMA; Earl D. Mallery, Executive Director of AMA; Col. Paul V. Betters, Executive Director of USCM; Mayor John J. Burns of Burlington, Vt., member of the Board of Trustees, USCM; John B. Blandford, Jr., National Housing Administrator, and Mr. Wyatt.

The mayors present, each of whom has an outstanding community program, pledged their continued cooperation to Mr. Wyatt. They instructed the executive officers of the U. S. Conference of Mayors and the American Municipal Association to work in close cooperation with the government. Specifically they asked these organizations to urge member communities to take such steps as the following:

1. Stimulate new construction—re-examining building codes and taking local measures to increase the production of building materials and to assure a sufficient supply of labor.
2. Establish veterans' housing referral centers where none exist, so that all vacancies, all houses offered for sale and all offers to share a home with a veteran can be listed at one central point. Such services, it was agreed, would be of great help in channeling vacancies and new homes into the hands of veterans' families.
3. Explore additional means of accommodating veterans—for example, encourage remodelling that will lead to the production of additional housing units.
4. Take full advantage of the temporary war housing supply. Under recently passed legislation, the federal government will bear the expense of demounting and transporting temporary units not needed on their present location to communities that need it to accommodate veterans.

The Mayors endorsed the program which began on January 15 to channel scarce building materials into low and moderate-cost housing which will be offered for sale or rent first to veterans. They stressed the need for more rental housing and urged that everything be done to stimulate its construction.

Wilson W. Wyatt

The mayors suggested a number of steps which they felt should be taken at the national level to meet the housing crisis. These included prompt passage of pending legislation designed to meet the immediate housing emergency and all phases of the long-term problem, including slum clearance; legislation along the lines of the Lanham Act to permit publicly financed conversions to secure additional dwelling units; strengthening of efforts to halt inflation and black marketing; and intensified efforts to speed the production of building materials.

"The meeting laid the groundwork for the sort of close cooperation between the federal government and the communities which is necessary in the present emergency," Mr. Wyatt commented at the end of the meeting. "The housing problem can be solved only if we do everything possible to speed the production of more homes and at the same time make the best possible use of the existing housing supply to ease the desperate situation facing returning veterans. Both lines of attack on the problem require the close cooperation of communities and the federal government."

* Since this item was put in type, announcement has been made of the appointment by President Truman of Mr. Wyatt as Administrator of the National Housing Agency to succeed John B. Blandford, Jr., who goes to China for important service as Budget Adviser to the Chinese government.

Neighborhood Redevelopment for St. Paul

FOLLOWING an act passed by the Minnesota Legislature last spring, Mayor McDonough has named five members of the St. Paul Planning Board to serve as a Neighborhood Redevelopment Commission to supervise any redevelopment projects carried out in the city.

Main inducement given private corporations by the act is the power of eminent domain to acquire 40 percent of the land in an area which they plan to redevelop after 60 percent of the land has been acquired by option or purchase. In order to initiate redevelopment, the city is also authorized to acquire land in blighted areas and sell or lease it to a redevelopment corporation.

The project must be carried out in a slum or blighted area; physical and financial plans must be approved by the commission after a public hearing; 10 percent of the land must be devoted to parks; and the present occupants of the area must not suffer "undue hardship" because of the redevelopment. The planning board is required to make a report and recommendation on the physical plans.

Redevelopment corporations are not tax exempt and no subsidy is provided in the bill nor is any limit set on profits or dividends.

The staff of the St. Paul Planning Board is currently preparing a pilot study to determine under what conditions the city could initiate such a project and absorb the differential between the present value of the blighted land and its value for redevelopment. As the city is empowered to acquire property in a blighted area, it perhaps could sell the houses for salvage and, as the city would already have title to the streets (some of which would be unnecessary in a replanned neighborhood) and to tax forfeited property, these factors might bring the acquisition cost down.

Members of the Neighborhood Redevelopment Commission are: Carl W. Cummins, Chairman; Joseph F. Reimbold, Harry C. Palmer, Edwin H. Lundie, and Gerald O'Donnell.

GEORGE H. HERROLD
Planning Engineer

THE PUBLIC...THE PRESS...THE MANAGEMENT

LIKE TROLLEY COACHES IN DAYTON

THE END OF LOCAL STREETCARS

Before another year has rolled around the oldest and the last of Dayton's streetcar lines—on Third and Fifth streets—will be a subject for antiquarians rather than reporters to write about.

The march of trolley coaches into the public transportation field here had begun about four years before the United States entered the war. If the war had not intervened to restrict the purchase of new equipment, they would have won a total victory over streetcars long before now. Whatever the merits of modernized streetcars may be for other cities, or even for Dayton, they didn't have a chance in competition with trolley coaches for the favor of Dayton riders. With the first taste of the new method of street transportation, back about 1937, this community became strongly trolley coach-minded.

Even wartime difficulties, arising from manpower shortages, insufficient equipment and overcrowded carriers, failed to dampen local enthusiasm for the streetcar's successor. The transportation companies in our day are more sensitive to public opinion than they were in an older time. And so, for Dayton, trolley coach service is the order of the day.

The farewell to the city's last streetcars will involve an expenditure of nearly $900,000 by the City Railway company. Besides giving the best in facilities to its patrons, the company's plans add another section to the already promising foundation of Dayton's postwar industrial and civic future.

It is fortunate that the City Railway company, which now operates approximately 80 per cent of the city's transportation facilities, is so well prepared financially to move right ahead on its postwar plans as soon as the equipment can be manufactured. This is a tribute to good management of its affairs not only during the war but before.

The City Railway Company owns and operates 82 1/2 per cent of the public transportation service in Dayton. Its 89 trolley coaches total 89 reasons why the public and the press insist on seeing more of these modern rubber-tired electrics on the streets of this city.

The accompanying editorial, which appeared in the Dayton Ohio Herald, mirrors the public's attitude toward City Railway's decision to extend its trolley coach service. If the public, expressing itself through the press, likes trolley coaches . . . they're good.

City Railway management likes them, too. That is why Dayton's two remaining street car lines are being converted to this popular, modern service. When the overhead is constructed and 45 new trolley coaches are added to the fleet, modernization, started in 1937, will be complete.

2680-T

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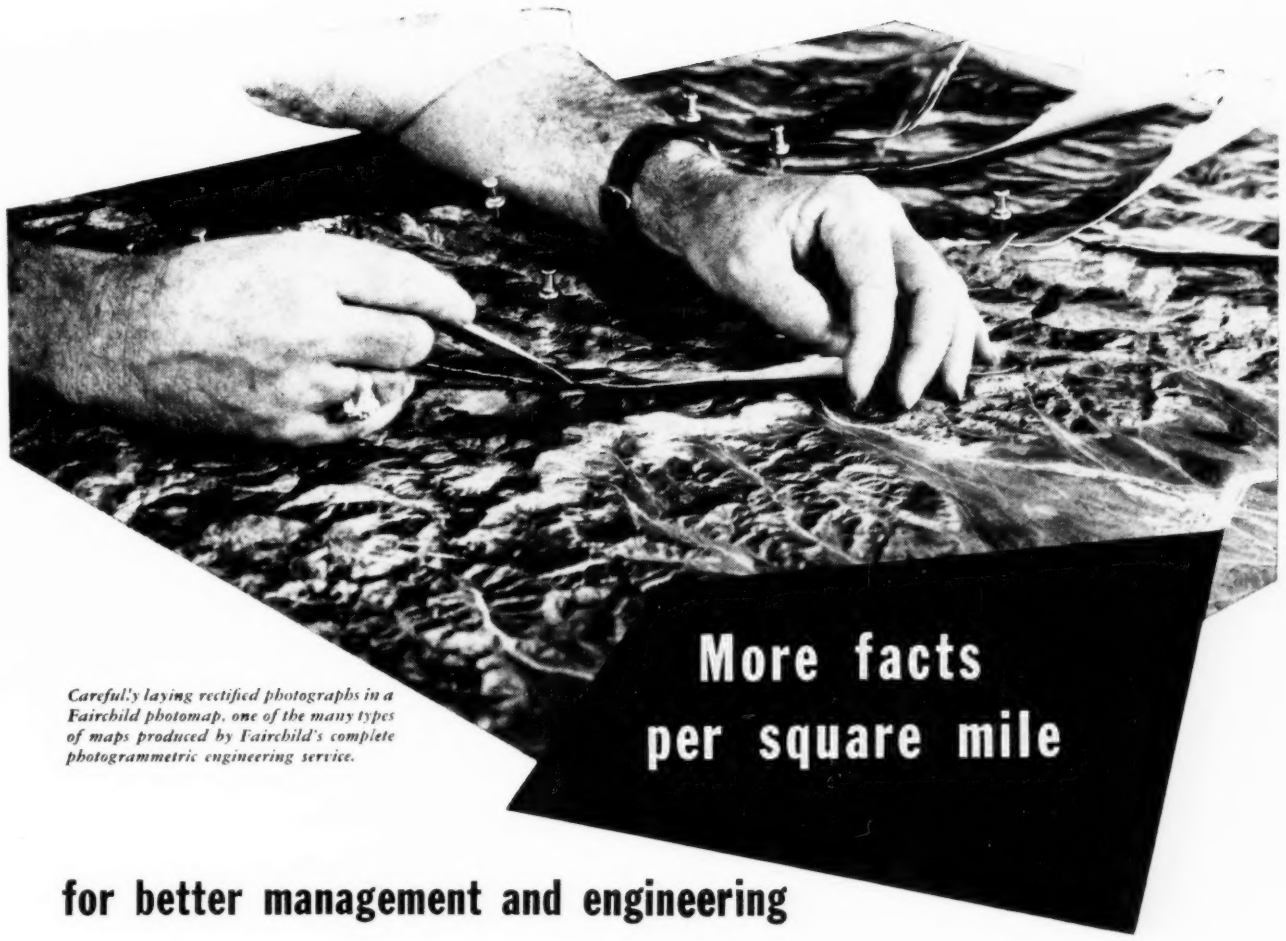

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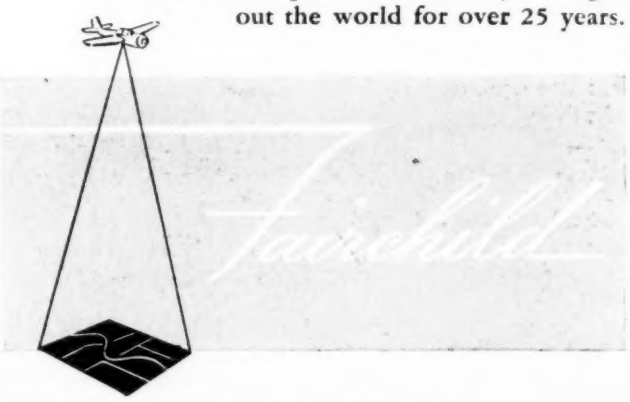

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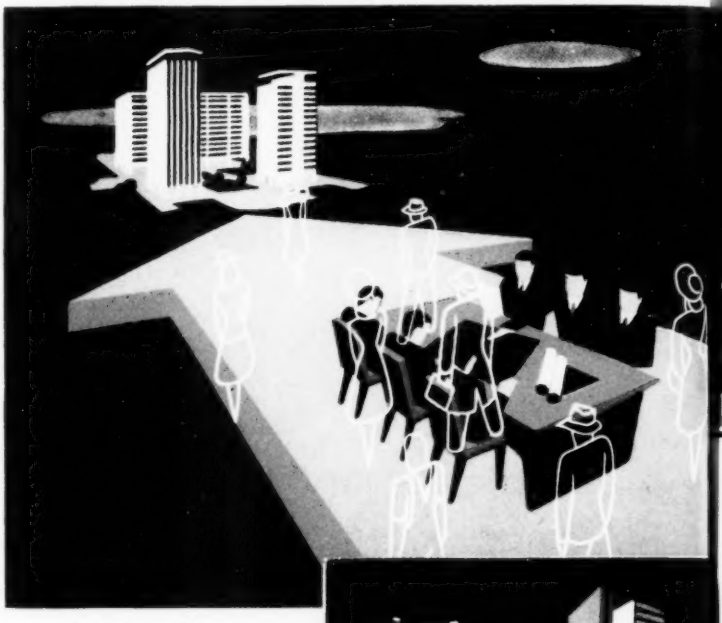
GENERAL ELECTRIC *Presents:*

Lifestream



Behind the Scenes of LIFESTREAM OF THE CITY

A product of the Raphael G. Wolff Studios of Hollywood, *Lifestream* took a year to produce. All settings are authentic, and in true natural color. Graphic, animated charts supplement the live action.

A full-color motion picture, with sound, to help you ease traffic congestion and obtain the best in transportation facilities—at lowest cost to riders and taxpayers

● Isn't that the No. 1 job of all officials and groups who are planning to make cities better places to live? No city can live and grow without facilities to move people swiftly to all parts of the community. To insure having these facilities in the future, it is essential to attack traffic congestion now.

Lifestream of the City digs down to the roots of city transportation, makes the basic causes of congestion easy to understand. Most important, it points the way to one effective solution that can be acted upon immediately.

By means of unique, animated charts combined with colorful, live action, you can readily see—

Why the value of property depends upon its accessibility to people.

How traffic congestion increases, and accessibility is reduced, as more people move about in private vehicles.

How improper application of superhighways defeats their purpose.

Why street space is used most efficiently by public-transit vehicles.

How increased use of public transit greatly reduces traffic congestion.

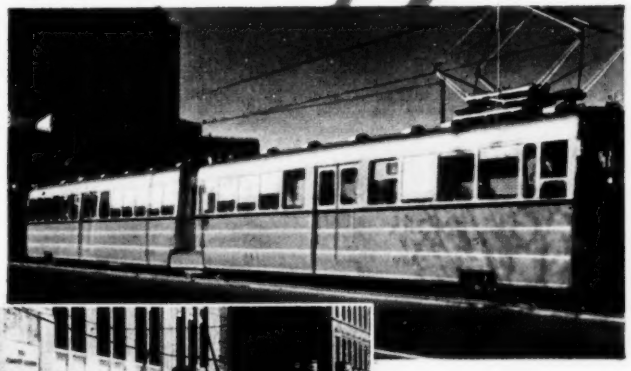
Never Was a Message So Timely

Restrictions on automobile manufacture have been lifted. The time for action is now—before your streets again become crowded beyond their capacity to move people freely, before traffic congestion accelerates the spread of blighted areas. *Lifestream of the City* presents no cure-all for traffic congestion, but it does show how congestion can be eased substantially at lowest cost to the community.

To see *Lifestream of the City* soon, call your local transit company. If the film is not yet available through them, read, on the opposite page, how you can arrange for a showing.

GENERAL ELECTRIC

...of the City



FREE!

A copy of *Lifestream of the City* can be obtained for showings to any social, civic, or business groups by filling in the coupon and mailing it to the nearest distributing point listed below.

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First choice (date) .....

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Fourth choice (date) .....

Underground Parking for Detroit

Detroit's central business district. The middle black section is the proposed Washington Blvd. garage, the grey shaded area surrounding is the zone of influence, and the light grey shaded areas are the present parking facilities

By V. B. STEINBAUGH
President, Allied Engineers, Inc.
Detroit, Mich.

THE IDEA for an underground parking lot in Detroit, Mich., was born in the minds of downtown business men who retained Allied Engineers, Inc., Detroit 26, to make an analysis of the project. The report summarizes this analysis, and 82 per cent of Detroit voters recently approved the project. The major portion of the data was obtained from the Traffic Engineering Bureau, whose survey of October 1944 recorded the the license number of each car entering the central business district according to time and place parked. The driver was asked where he was going and for what purpose—shopping, business, work or other. When the car was driven away the time of leaving was also noted with the license number. The information was punched into I.B.M. tabulating cards.

Motorists will disregard other factors to park in an accessible location within reasonable walking distance of their destination. The average walking distance now is about 750 feet, which means that a substantial proportion of the motorists walk considerably farther than that. For purposes of detailed study of present parking and of the influence of the proposed parking garage, 1,000 feet has been assumed as the reasonable walking distance and the limits of the zone of influence. The map shows the relative size of this zone which 24 percent of the motorists who drive downtown have as their primary destination.

Approximately 1,700 spaces are *available* within the zone of influence, of which fewer than 300 are at the curb. But during the hour of maximum demand for parking space (1:30 p.m.) there were 1,229 cars parked whose destinations were within the zone of influence. Thus 60 percent of the people who are going to destinations within the zone of influence of the Washington Boulevard Underground Garage cannot find parking places within this area during the hour of maximum parking demand.

Analysis of the purposes for which people drive to the central business district betwen 7a.m. and 7 p.m. is shown in the table below.

This tabulation indicated that Washington Boulevard was an excellent location in which to provide parking facilities for shoppers and is a good one for business people. Below are the average fees now paid for parking in the central business district:

Purpose of trip	*Average fee in cents*
Shopping	30
Business	27
Work	22
Other	30

Data and factors already discussed were used to determine that 2,250 cars would use the garage on weekdays between 7 a.m. and 7 p.m. During the hours of maximum occupancy 905 cars would be parked. Studies were made of both a 1,700 and a 1,000-car garage. Cost figures are given below for the 1,000-car project which is regarded as sufficient capacity.

Annual income to be obtained from parking fees has been derived by mul-

		PURPOSE OF TRIP			
Destination	*Cars*	*Shopping*	*Business*	*Work*	*Other*
Business District	52,750	14%	48%	26%	12%
Zone of Influence	12,801	21%	48%	20%	11%

THE PRISMO SIGN KIT

The owl is not as wise as tradition pretends—but the wise traffic engineer will specify Prismo for his pavement marking needs.

Prismo Life-Line outwears from 3 to 5 applications of plain paint which makes it an economical buy.

Prismo Life-Line gives 24-hour service and reduces traffic accidents, making it the wise buy—at savings to you.

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Thousands of safety signs are being reflectorized with Prismo Sign Kits.

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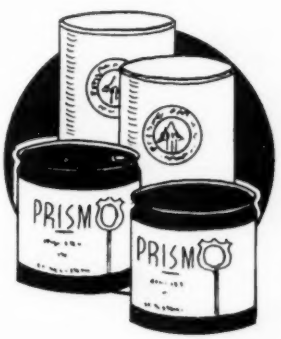
It can be applied on any surface—air dries over night—has wide angularity—will not bubble or blister—lasts longer.

Write for Bulletin 244



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There's a reason . . .

SINCE 1935—when the first Dual Automatic Parking Meters were installed to help solve America's growing traffic control problem—Duals have kept pace with modern developments and construction, progressively offering more cities more for their money.

Before the war interrupted production, 71,393 Duals served 166 cities in 22 states—more than any other two makes combined. Today, Duals are again in production, ready to help in solving your increased postwar traffic problems.

Motorists, merchants, police and city officials all agree on Dual superiority because Duals are easy to install, economical to maintain, simple to operate.

Learn about the Dual plan. Write for your free copy of "Metered Parking—Today's Answer to Tomorrow's Traffic Control Problem". Let Dual's engineers survey your needs.

THE DUAL PARKING METER COMPANY
HARTER BANK BUILDING • CANTON 2, OHIO

When it Comes to Controlling Parking....
You can do it better with DUALS

tiplying the average fee (30c) by the number of potential customers. Estimated revenues include an allowance for night, Sunday, and holiday parking based on a study of present facilities. It is estimated that revenues would total $232,000 annually.

Income can also be derived from the sale of gasoline, oil, greasing, and washing. Leases for direct underground connections into adjoining buildings might be sold. As these are decisions of management, such income is not included in this analysis.

Construction cost of the entire unit has been estimated at $3,131,560 by Derrick & Gamber, Inc., architects. They have also estimated that the construction cost of this unit between Grand River Avenue and Park Avenue would be $1,816,300. Annual cost of $75,000 is estimated for personnel, and $10,000 for heat, light, maintenance, and other expenses. This gives a total of $85,000 per year for operation and maintenance.

Structures of this nature are usually financed by bond issues. It is assumed that the structure would be tax free because it is to become public property as soon as the capital investment is liquidated. The report contains a table showing a retirement plan for a serial bond issue of $1,900,000 carrying 3 percent interest and allowing a one-year construction period. Parking fee revenue would pay the annual costs of operation and maintenance and retire the bond issue in 18 years.

Harmonious Transit Planning in Birmingham

By COOPER GREEN, President
City Commission
Birmingham, Ala.

BIRMINGHAM has always been a pioneer in maintaining a good public transit system. After an exhaustive study of the urban transportation problem just before the end of the war, we launched an extensive modernization program which called for complete cooperation between the city administration and our local transit operator. We felt that during the war, with the curtailment of the manufacture of automobiles, it became increasingly apparent that mass transportation was the only solution to the problem of carrying large numbers of people, especially in urban communities where traffic congestion and parking problems caused by private automobiles were particularly acute.

We are proud to report that the program got under way speedily and with complete accord between the city and the transit operator, for both realized that the public was entitled to a modernized public service. Our plan calls for expenditure of approximately $3,000,000 and provides for conversion of some fifteen street car lines to rubber-tired motor vehicles including the addition of new-type streamlined trackless trolleys, and a large number of new gas buses. New street cars are also needed. During the war when public transportation riding was at a peak, no effort was spared by our local operators to maintain a high record of safety; however, vehicles are now wearing out so rapidly that within the next few years nearly all of them will have to be replaced.

Considering Transit Needs

Our study showed that a modern transportation system in a fast growing metropolitan community like Birmingham requires the use of all three types of urban transit vehicles. In each instance the type of vehicle was selected which was best adapted to the particular traffic conditions on the route where it is to be used.

While street cars and buses have been in operation in Birmingham for some time, trolley coaches or trackless trolleys are new to us. However, they have proved satisfactory in other cities and we feel confident that the public will like them.

New trolley coaches such as these are now part of the modernized transportation system of Birmingham

Calls for Uniform Traffic Standards

A RETURN of the pre-war accident rate is not inevitable if we can have a combination of saner driving, safer vehicles, more modern highways, standard traffic control devices, and uniform traffic regulations. The accident rate already has risen sharply since the end of gasoline rationing, and there will be a continuing rise in highway fatalities unless the public pays greater attention to safety measures than ever before.

Building new highways of scientific design, widening existing pavements, replacing narrow bridges, constructing underpasses and grade separations—on which billions of dollars will be spent in the next few years—will help to reduce the accident frequency, but the full value of these improvements will not be realized unless the motoring public develops a greater appreciation of the penalties of careless driving.

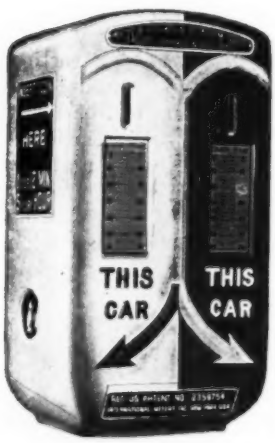
Confusion caused by varying traffic regulations and by lack of uniformity of traffic signs and signals also will continue to cause avoidable accidents unless uniform standards are adopted nationwide. Progress has been made toward standardization in recent years but complete uniformity has by no means been reached.

CLAUDE C. BLAIR
President, Paving Brick Institute
Washington, D. C.

THE NEW "TWIN" AUTOMATIC PARKING METER

Above is the rear view of the meter. Each rear flag operates simultaneously with its corresponding front flag.

The "TWIN" on the stanchion → and immediately below show the front face of the meter.



This illustration of meter head shows position of violation flags when parking spaces are unoccupied.

★

The ONLY meter which parks two adjoining cars. Covered by patents recently issued.

★

Large, red signal flags, tolling off the minutes against a white dial background, provide instant visibility to the police officer even from a great distance. *He can tab two cars with one look.*

★

It is a beacon into the post-war future of parking and traffic control.

★

Because you only need half the number of meters:

YOU SAVE YOUR CITY
Thousands of Dollars in Cost of Meters,
Cost of Maintenance, Service,
Collection, Etc.

★

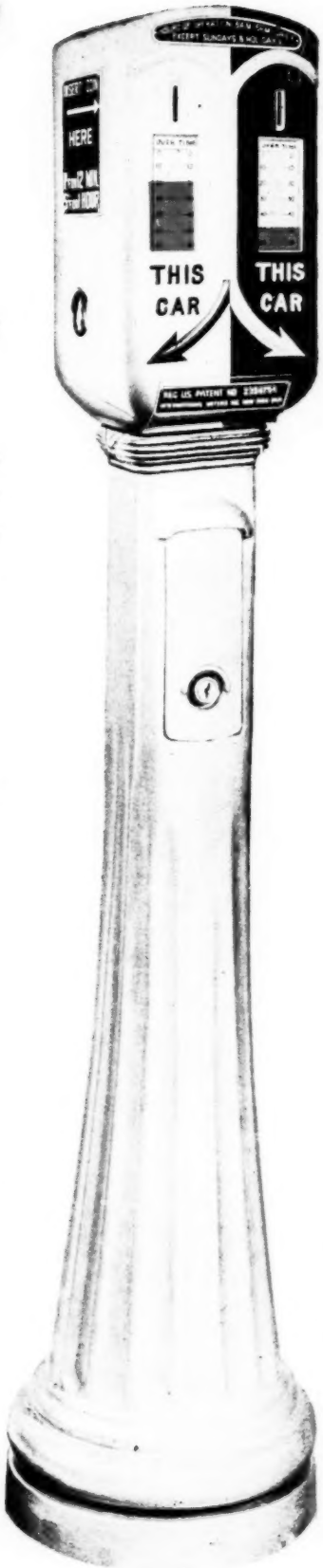
It amortizes itself (from collections) in about half the time required by other meters.

★

You have only half the posts on "Main St." The stanchion helps to beautify the city.

You see the "Twin" opened up at the right ready for minor repairs without removal.

The mechanism can be lifted out without the turn of a screw or bolt —and replaced as easily.



SEE OUR ADS IN JUNE THROUGH DECEMBER ISSUES

INTERNATIONAL METERS, INC.

41 East 42nd Street **Phone: MUrray Hill 2-5236** **New York 17, N. Y.**

Traffic Congestion Doesn't Help Business

BRANDED as "the major problem confronting the planning of cities in 1946" in a recent survey by some 900 members of the American Society of Civil Engineers' city planning division, traffic congestion was made the number one problem at a session of the 93rd annual meeting in the Hotel Commodore, New York City.

"Attacks of traffic congestion occur at fairly regular intervals and at definite places within the traffic system," said Leslie Williams, city planning engineer, American Transit Association, New York. "At Fifth Avenue and 42nd Street in New York City private automobile congestion rose and waned in the face of a rising pedestrian and motor bus passenger demand, with more private cars using this intersection in 1925 than in 1939, when there were twice as many automobiles registered in metropolitan New York. The movement of people and goods in this intersection is greater today than ever before, indicating that a prosperous downtown business site needs customers, not cars, to prosper."

Corroborating this last statement, Robert A. Mitchell, Chief, Bureau of Traffic Engineering, Philadelphia, presented the results of a curb parking and shopping survey in Philadelphia's central business district which showed that:

Philadelphia Survey Results Analyzed

Only slightly more than 3 percent of the persons entering the district during shopping hours come in cars parked at the curb, legally or illegally. Only 21.5 percent of the parked cars' occupants come to shop. Store owners themselves constituted another 12.5 percent of this group.

Interviews with shoppers revealed that 75.4 percent came to the area by public transit: 13 percent by train; 8.4 percent by private automobile, and 3.2 percent walked.

Of the shoppers using private cars, 26 percent parked in the street. Thus fewer than 3 percent of the shoppers parked their cars at the curb.

More than 78 percent of the cars parked for less than one hour, yet the 3 percent parked more than five hours took up 18 percent of available curb space.

"As a result of these surveys, parking was prohibited on practically all of the streets in the central business district of Philadelphia beginning January 2, this year, with the whole-hearted backing of the important merchant associations," Mr. Mitchell said. "These facts bear out what traffic engineers have believed to be true for many years, that the great mass of the business is done by persons using mass transportation and, therefore, that merchants and business interests should support measures to free the streets where necessary for the better movement of vehicles, and oppose the use of street space for the storage of vehicles.

"It is very rare that you find a merchant who doesn't believe that traffic congestion in front of his store means better business. This belief has been responsible, probably more than any one thing, for the clogging of streets in the business districts. This influence exerted by merchants and their associations on public officials continues to prevent traffic authorities from doing a major job of reducing congestion. Use of serially-numbered, triple-ticket violation notices makes it more difficult for the violation to be squashed by political fixing. In the main, police knows how and desires to properly enforce traffic regulations. It can be relied upon to do this if truly backed up by the higher-ups and the courts."

How the Philadelphia plan was put over will be told in the March issue of THE AMERICAN CITY.

Manufacturer Discusses Traffic Guide Signs

To the Editor of THE AMERICAN CITY:

IN "Can We Have Better Traffic Guide Signs?" in the November issue of THE AMERICAN CITY, Norbert Brown says that destination, location, and directional guide signs have not kept pace with the advances in the design of route markers, that lettering is often too small, and that spacing between letters and names is often inadequate for good legibility. In this connection it is necessary to take into consideration the fact that directional, destination, and location signs in many instances have so many letters that making the letters larger or putting more spacing between them will make the signs themselves much larger. This, of course, increases the cost of the signs and in some cases mounting space available will not be suitable.

As Mr. Brown's questioning talk was directed to the manufacturers of signs as well as to the city authorities who install them, it may be useful for us to state that we are now in full production on our prewar products—highway signs, reflector button signals, parking limitation signs, and roadside delineators. We are also in the fortunate position of having high quality rust resisting steel and synthetic enamels so important in producing an attractive and durable sign for outside use.

We are now producing the same line of seven-year life reflector buttons we made several years before the war. Particularly, we shall be making plastic reflectors of the prismatic type designed to snap and lock into the holes of the sign. Replacements of reflector buttons can be made in the field without removing the signs from the posts or removing the rear housing. Interest is growing in roadside delineators. These units erected at intervals along the road show horizontal and vertical curves and outline the road far ahead of the driver. It will be possible to incorporate colors such as amber or red to indicate to the motorist that hazards ahead demand reduced speed. Made of methacrylate of the prismatic style, they are much brighter than glass. They can also be made in varying shapes so that a particular outline at night will indicate a particular type of hazard ahead.

J. H. HAMMER
The Grote Manufacturing Co.,
Bellevue, Ky.

Can the Effect of Housing on Health Be Measured?

THAT the accumulated experience of mankind amply demonstrates that housing and environment vitally affect mental and physical health, and that the case for proper housing does not depend upon scientific evidence that the provision of good homes in good neighborhoods lowers death rates or reduces sickness, is pointed out in a recent statement by Bleecker Marquette, Fellow of the American Public Health Association and Executive Secretary of the Cincinnati Better Housing League.

More Study Is Needed

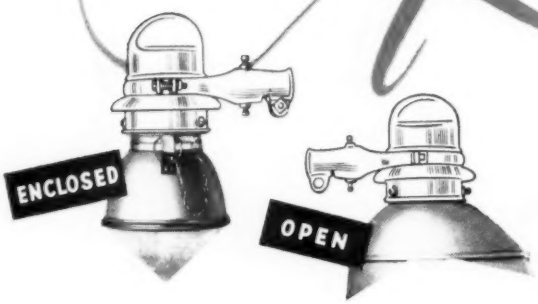
"The movement for better housing," says Mr. Marquette, "has ample justification in the democratic principle that people are entitled to an opportunity for decent homes just as they are entitled to an opportunity for education, and to the indisputable fact that substandard housing areas are an economic and social burden upon any community." And he adds: "Therefore, what we need is not more evidence that housing affects health. We have enough already. What we need is exact knowledge as to precisely how and to what extent it affects health. Until comparatively recent years, projects that provided good homes in a good neighborhood were few. Now, we have many such public projects for low income families as well as some private developments.

"A Joint Committee of the American Public Health Association and the National Association of Housing Officials is now engaged in an effort to outline the techniques by which such an appraisal can be made as to the specific effects on physical health—and on behavior and mental health too, provided suitable measurements of the latter are available."

Announces

A Basic Advance in SUBURBAN STREETLIGHTING

Two new reflectors -- using 1000- to 2500-lumen lamps



These two new reflectors (open and enclosed) are the "better sight" successors to the radial-wave reflector for light-traffic and residential streets – the suburban streets.

When equipped with the new G-E 2500-lumen series lamps of 5⅜-inch light-center length and spaced as recommended, these new reflectors make it practical and economical to meet I.E.S. Standards for suburban streets.

For the first time, they bring scientific light control into the field of minimum-cost street-lighting.

Full details on these new reflectors will soon be in the hands of your local utility. Ask how these units can brighten up your community. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

Adaptable to your present hoods and insulators, they furnish greatly improved visibility as unit-for-unit replacements of radial-wave reflectors.

Good Street Lighting
THE SIGN OF A GOOD PLACE TO LIVE

STREET LIGHTS *for Better Seeing*

GENERAL ELECTRIC

452-37-3010

Outdoor Lighting

STREETS — HIGHWAYS — FLOODLIGHTING

Cleveland Estimates Profits in Lives Saved

By WILLIAM T. SOJEBA

Chief, Bureau of Street Lighting
Cleveland, Ohio

WHAT can Cleveland expect in traffic accident reduction from our project of improved street lighting on high-accident traffic thoroughfares? A quick look at past experience furnishes the answer.

From 1932 to 1943, traffic accidents took a toll of 2,075 lives in Cleveland. Effective in 1938, improved traffic enforcement and regulation cut fatalities during the second six years to 743 as against 1,332 in the first six years. Thus the average annual saving in lives due to this program amounted to 96. Further reduction in the loss of human lives must be accomplished through some additional means.

A study of the total 2,075 traffic fatalities reveals that 69 percent occurred between sunset and sunrise. Since all other elements of hazard contributing to these traffic fatalities, with the possible exception of intoxication and fatigue, remained the same for both day and night driving, the Bureau of Street Lighting made a study to determine to what extent visibility and street illumination were involved in making the city streets "casualty ways."

With the cooperation and assistance of the General Electric Company, the Westinghouse Electric Corporation, and students of Case School of Applied Science, surveys were made of the street illumination on several of the principal streets and thoroughfares of the city. First it was found that there was a decided deficiency of illumination upon the pavement surfaces according to the recommended code of the Illuminating Engineering Society and second, as the illumination more nearly conformed to the recommended levels of illumination, the night percentage of traffic fatalities and economic losses decreased.

Before and After Record Studied

To determine the extent to which the modernization of street lighting will reduce traffic accidents, a study was made of the accident experience on a street where street lighting conditions had been improved. These studies included all accidents that took place in the year before the improvement and a corresponding period after the improvement. In spite of the fact that the traffic volume had increased, night accidents were found to have decreased 47 percent. An increase of 12 percent in day accidents can be attributed almost directly to the increased use of the street. The relighted portion was only 1.2 miles long. The change in street lighting consisted of the replacement of the luminaires with ones of modern design, raising the mounting height from about 20 feet to 26 feet and installing three additional lamps. The improvements cost approximately $4,860 and the yearly operating cost was increased $117.

The Savings Are Impressive

If street lighting illumination levels are raised to conform to nationally recommended practices, will such improvements pay? The answer comes from an analysis which was made of economic losses for day and night pedestrian accidents over a three-year period along a street, a portion of which had illumination conforming to E.I.S. recommended values. The balance of the street had illumination of about 20 percent of the recommended value. *On the well-lighted portion* night losses were $5,400 per mile and day losses were $17,500. *On the poorly-lighted section* night losses were $29,350 per mile and day losses $11,550.

From all this the Bureau of Street Lighting concludes that important benefits will accrue to the community if it carries out its post-war program for street lighting modernization and improvement. For instance, if street lighting during the years 1938 to 1943 inclusive had conformed to recommended practice, it is probable that 283 persons would not have died in traffic accidents.

Excerpts from "What Cleveland Expects from Safety Lighting," *Traffic Engineering*, monthly publication of the Institute of Traffic Engineers, December 1945 issue.

An English View of Street Lighting

THE COST of street lighting facilities is a small premium to pay for safer streets, said E. C. Lennox in a paper before the British Institution of Electrical Engineers Installations Section recently. Moreover, proper lighting assists the police and improves the night appearance of the town.

The purpose of adequate street lighting is to enable the driver and the pedestrian to see accurately and quickly. The installation must create a contrast of brightness between the object or obstacle and its background of sidewalks, pavement, fences, and buildings. To achieve this most successfully calls for careful placing of each lighting unit. On traffic arteries Mr. Lennox specifies an average of 150 feet and a maximum of 180 feet, and on curves a minimum of even 90 feet distance between lighting units, with luminaires 25 feet high. Length of bracket, or overhang, is an important consideration.

England's code of practice for street lighting is the report issued by the Ministry of Transport. A recommendation was made recently for lighting standards of pleasing design in recognition of the daytime appearance of the street lighting system. It is interesting to note that the Royal Fine Arts Commission has cooperated with manufacturers toward improving the designs.

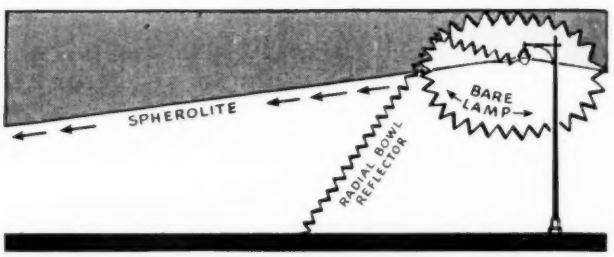
The Ministry of Transport report recommends two mounting heights. The 25-foot mounting for luminaires on traffic arteries is in line with good American practice. The other mounting height of 15 feet for non-traffic routes is looked on here as antiquated and an invitation to glare. With respect to types of designs of lighting standards, Mr. Lennox says that the ultimate choice would always be a matter of taste.

He speaks of a bewildering multiplicity of luminaire designs. In the United States at least there has been a reasonable standardization of modern designs. Radical departures in appearance are due to the continued use, in many towns, of old-style fixtures—the upright types and radial wave.

Here's why L-M SPHEROLITE-ing

is more effective... more economical!

CONTROLLED DISTRIBUTION



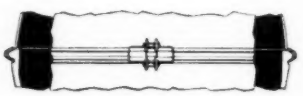
L-M Spherolite literally "aims" the light in the direction and to the area where it is needed. Scientifically designed fluted reflector puts all the light to work . . . conserves light for distant areas instead of wasting it above the horizontal. Combination of Alzak aluminum reflector and Holophane one-piece refractor assures absolute control of light distribution in both vertical and horizontal planes. Light source is concealed to reduce dangerous glare.

EASILY SERVICED AT TWO POINTS

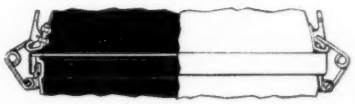
pherolite seldom needs servicg because its tight sealing eps out dust and bugs. But construction offers maximum xibility when servicing is necsary. To re-lamp, release coil ring toggle latches, lift them f hood and allow reflector to ng by chain (1). To replace glassware, loosen take-up screws of the V-band, or open latches (2). Slip out old glassware and slip in new. No need to return Spherolite to the factory for such replacements and repairs. You can re-lamp Spherolite, clean its reflector, replace or clean glassware *in the field*.

CHOICE OF THREE TYPES OF HOLDERS

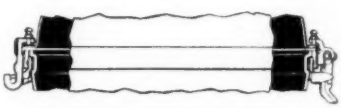
Spherolite is available with V-band, pressure latches, or automatic latch and hinge. ***V-band*** provides permanent seal between glassware and reflector; but loosening two screws permits replacing glassware. ***Pressure latches*** provide easy access to lamp, and permits swinging glassware from either latch acting as hinge. ***Automatic type*** permits re-lamping from the ground.



V-band holder



Fressure latches



Automatic latch and hinge

Write For This Bulletin 4432

Illustrations and helpful information on the Spherolite system. Call or write the nearest L-M Branch Office or Line Material Co., Milwaukee 1, Wisconsin.

LINE MATERIAL
STREET LIGHTING EQUIPMENT

L-M DISTRIBUTION EQUIPMENT INCLUDES: Distribution Transformers • Fuse Cutouts and Fuse Links • Lightning Arresters • Oil Switches • Pole Line Hardware • Line Construction Specialties • Underground Equipment • Fibre Conduit • Street and Airport Lighting Equipment • Wired Radio Control Equipment • Capacitors

This standardization of appearance of modern luminaires in this country is probably due to the general agreement on luminaire requirements that all the light possible be placed on the roadway.

Vapor Lamps

The author recommends study by the purchaser and user of street lighting equipment of the sodium vapor and the mercury vapor lamps. Both are more economical in consumption of energy than other types but more expensive to buy. Because of color distortion both are as yet chiefly indicated for highway and street intersection use. Many miles of British urban traffic arteries in the large cities are lighted with mercury. According to A. F. Dickerson, even in 1935 there were 7,500 mercury lamps in England, and at present probably 10,000, as compared with 1,500 in the United States. In the United States mercury vapor lighting on business streets is meeting with much favor.

The introduction of the low-pressure mercury-vapor fluorescent tubes raised the question of their use in street lighting because of their superior efficiency and more normal color output compared with the high pressure mercury vapor and sodium lamps. A difficulty is their low wattage, the largest being 80 watts, necessitating four tubes per 150 foot spacing, in order to equal the 250-watt high pressure mercury vapor lamps. These tubes, moreover, are 5 feet long by 1½ inches in diameter and difficult to house and service efficiently.

Research goes on and there is no ultimate style or perfection, but every index and guide urges use of the luminaires now available. The best argument in favor of good street lighting is a good installation. Expectations of traffic volumes now demand, rather than suggest, traffic safety lighting. The electrical industry, both power producers and equipment makers, should supply *appropriate* lighting as an encouragement to nationwide relighting.

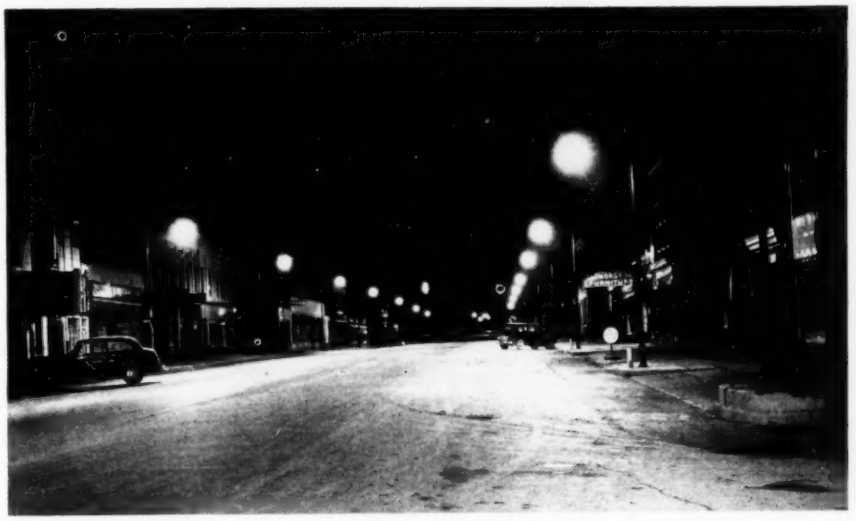
Do You Know Whether Your Street Lighting Is Good?

STREET lighting, like roses and people, is sometimes appreciated most when it is absent. In the recent gas strike in London many people realized for the first time how many miles of London streets are still lighted by gas, compared with the residential areas outside the city. "The general public," remarked *The Electrician* recently, "does not normally pay much attention to whether street lighting is by gas or electricity so long as the lighting is reasonably good, and nothing short of a major embarrassment to one or the other industry is able to excite their interest."

The fact is, of course, that the public has no standard by which to know whether the lighting is good or indifferent. Obviously blackout and dimout are very poor lighting, but whether or not one's own town's street lighting is adequate is difficult for the citizen to decide, if indeed the question ever occurs to him.

Vital to the acceptance and installation of better street lighting is the continuous and spirited education of the public and public officials by experts who can demonstrate convincingly the reasons for standards and who can measure lighting efficiency.

Planned Relighting—and More—Wanted



Results of new street lighting installation in West Branch, Mich.

By G. E. KORTEN
General Street Lighting Service Supervisor, Consumers Power Co.
Jackson, Mich.

WEST BRANCH, MICH., population 2,000, located near the Lower Peninsula, had a plan for rellighting the business district after the war. As shown on the photograph, the plan has been put into operation by the Consumers Power Company of Jackson, Mich.

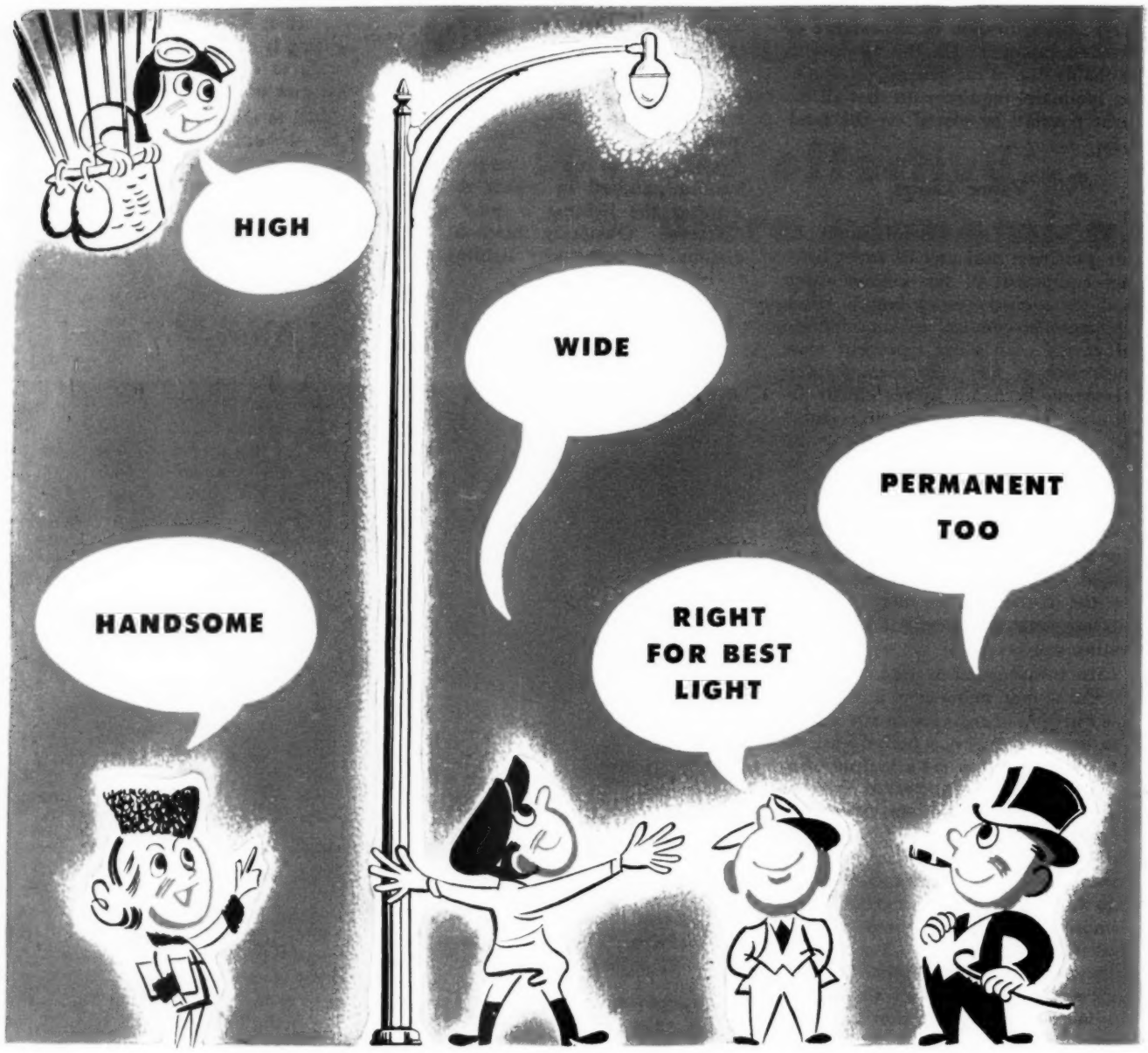
One of the main highways to the north passes through the business district and in the fall during the deer hunting season, and in the spring during the trout season, a number of persons and vehicles pass through this community after dark.

The lighting installation we set up is on the main highway and consists of sixteen 6,000-lumen lamps mounted on 23-foot Union Metal steel standards with 6-foot brackets. These standards have a staggered arrangement with a 55-foot spacing between each standard measured along the center line of the road. By using an asymmetric refractor in this luminaire we obtain even level of illumination on the pavement, with little noticeable glare in the eyes of the driving motorists.

These new lights replace an old installation consisting of twenty-two 2,500-lumen units which were mounted on cast-iron poles about 12 feet above the pavement. These old posts were very near the curb and were continually being bumped by cars which park at an angle on this pavement. The new standards are moved back from the edge of the curb and are protected by bumper posts so that any cars which jump the curb won't hit them.

In addition to these sixteen 6,000-lumen lamps the street lighting installation in West Branch consists of twelve 6,000-lumen center suspension lamps on the main thoroughfare, and fifty-one 2,500-lumen overhead lamps on the secondary streets. The new installation is served by a multiple system of two overhead wires and the installation cost was less than half of the cost if served by underground cable. The annual cost to the town is $2,381.65.

That West Branchians are pleased with the new lighting is indicated by the request for 24 additional 6,000-lumen bracket lamps in the area now lighted by five 6,000-lumen center suspension luminaires. Also there has been a marked decrease in the number of night traffic accidents since the new installation was made.



PICTURED above is the latest all-steel Union Metal street lighting standard. These modern, streamlined poles have been designed to meet all requirements of good street lighting practice, and are available in standardized heights to reach nominal light centers of 20, 25, 30, 35 and 40 feet.

Brackets are of the new 45 degree upsweep type for easy wiring, and come in 4, 6 and 8 foot lengths with supporting scroll. Also available are 10, 12, 15 and 18 foot mast arms with top side-sway bracing.

Where transformers are required, fabricated steel transformer bases are supplied which add 1 ft. 8 in. to the over-all height of the standard.

Two attractive styles—octaflute or plain round. For complete information, write The Union Metal Mfg. Co., Canton 5, Ohio.

UNION METAL

Largest Producers of Street Lighting Standards

The Perilous Period

The case for traffic safety lighting in a summary of a report by Richard E. Simpson, Research Consultant, Connecticut War Production Fund to Conserve Manpower

FIFTEEN YEARS' PEDESTRIAN FATALITIES IN TEN CONNECTICUT CITIES

Entire 24 hours; D = day N = night

At Intersections		Between Intersections		Total	
D	N	D	N	D	N
140	392	252	558	392	950

THE PERILOUS PERIOD: 5 p.m. to 8 p.m

May, June, July, August		Oct., Nov., Dec., Jan.	
369 Daylight Hours		339 Dark Hours	
At Intersections	Between Intersections	At Intersections	Between Intersections
16	25	126	160

OF THE 1,874 total fatalities on the streets of the principal ten cities of Connecticut during the last fifteen years, 1,432 were killed on 323 miles, or 13 percent, of the total street mileage—and 1,022 of them at night.

On sixty miles of these more dangerous streets improved street lighting was in service part of the fifteen years. Fatalities on these streets dropped 67 percent after relighting.

At this rate, had the full 232 miles of streets been adequately lighted, the deaths would have numbered only 251 instead of 1,022 at night—a saving of 44 lives per year. Per 100 million vehicle miles on these streets there were 4.8 day killings and 36.6 night. On the remaining streets the figures were 2.8 day and 8.3 night.

When the fatalities were tabulated by location, the names of certain streets appeared again and again. These "selected streets" represent 13.4 percent of the total street mileage of these cities, carry 51 percent of the traffic volume, and are the locale of 76.4 percent of the traffic fatalities. Of all traffic fatalities on these selected streets, 71 percent occurred at night.

Although fewer than 10 percent of night pedestrians cross the street between intersections, 59 percent of the night pedestrian fatalities occur in this area. In effect this means that a pedestrian crossing the street at midblock has twelve times as many chances of being killed as when he crosses at an intersection. The average motorist does not expect to encounter cross traffic between intersections and is not likely to be as alert as he is at intersections. The average speed is higher and night visibility is generally lower between than at intersections. On the relighted streets there was an 80 percent reduction in pedestrian fatality rate in mid-block areas.

Copies of the complete survey may be had by addressing the Connecticut Highway Safety Commission, Room 37, State Office Building, Hartford, Conn.

Detroit Public Lighting Commission Plans

A COMPREHENSIVE plan designed to meet the requirements for street lighting, public buildings, and street railway operation, and to fit in with other elements of the Master Plan has been developed jointly by the Public Lighting Commission and the City Plan Commission of Detroit, Mich.

New facilities the location of which is determined under this plan are a 35,000 kilowatt power plant and three street lighting substations. Other changes and replacements which will aid in rehabilitation of residential areas have also been agreed to under the plan.

The Public Lighting Commission will construct its additional power plant at the site of the present Mistersky Plant. Expansion of facilities in this industrial area will help preserve previously considered sites on the riverfront for recreational and residential use. The Commission produces electrical energy for street lighting, street railways, operation of the water and sewage systems, and for lighting in schools and public housing. It also operates a steam plant for heating nearby public buildings.

As a necessary part of its distribution system, the Public Lighting Commission operates twenty substations to serve railway lines, sixteen lighting substations, and four switching substations. Three lighting substations will be constructed in outlying areas to serve the street lighting requirements of new residential sections. The elimination or removal of existing obsolete or badly located plants will depend in part on the future requirements of the Department of Street Railways.

Report on Street Lighting Techniques in Many Areas

THE 1944 report of present and recommended street lighting techniques made by the Committee on Public Lighting of the American Public Works Association, Chicago, has been issued as Association Bulletin Number 31, price $1.50. The highlights of this report were published in the Lighting and Power Section of MUNICIPAL INDEX, under the signature of the Committee Chairman, Lloyd M. Johnson, Commisisoner of the Department of Streets and Electricity of Chicago.

The report is based on extensive questionnaires filled in by 51 cities having a total population of 24,650,000 and a total street mileage of 34,800, of which 29,100 miles are lighted by 676,000 street lights. Of these, 325,000 lights, or 48 percent, are municipally owned.

Only three of the cities attempt to regulate tree planting to facilitate street lighting. Yet practically all recommend that this should be done. They recommend that the following trees be prohibited: poplars, willow, box elder, soft, split, silver and red maple, white birch, acacia, all nut trees, china-berries, homagoliard, cork elm, chinese elm, sycamore and ailanthus.

With respect to conductor insulation, 42 cities prefer rubber; 21 use varnished cambric, though two of these prefer rubber; and six use paper insulation, though three recommend rubber as preferable.

Tabulations of average recommended street lighting practices, as reported by 36 cities, cover ten important factors which included lamp size, spacing, fixture mounting, and type of fixture.

Classical Notes

IN ancient Antioch the Greeks had remarkable street lighting, according to H. C. Weston, President of the British Illuminating Engineering Society. . . . Probably the first description of glare was given by the Roman poet Lucretius—and 2,000 years later, glare is still a major problem in street lighting!

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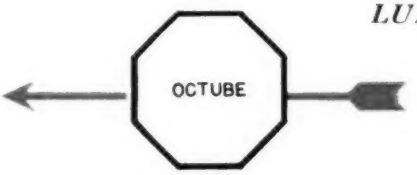

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City Plan Kindles Big Development

By REBECCA GREEN

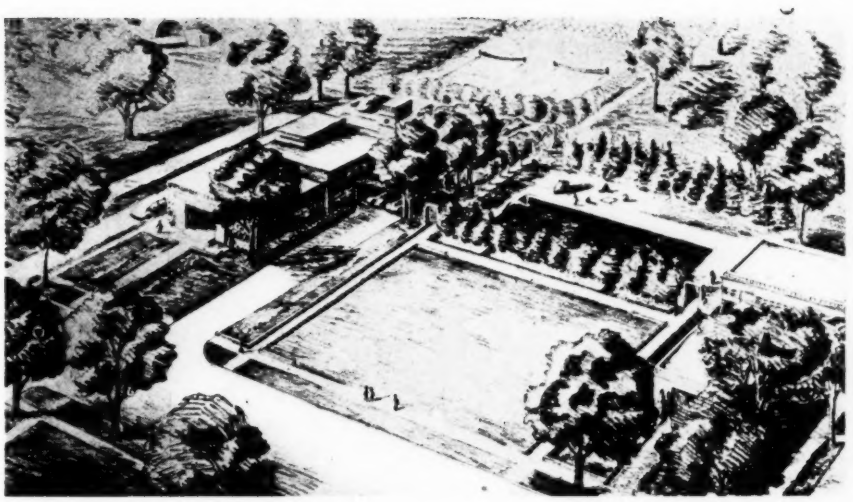
AT THE East gate of Denver is the city of Aurora. For years it was debt ridden and stagnant, but now a city plan is bringing it to great activity and prosperity. From the time of its incorporation this city has been in financial difficulties. The original promoters left it with a serious debt which has been reduced through measures of utmost economy.

The city plan prepared by S. R. DeBoer & Co., city planners of Denver, points the way toward greater prosperity through greater activity. The employment section of the report pointed out that the city has an employment source of great stability near its boundaries. One of the nation's largest Army hospitals is located there with steady payrolls, but employees and ex-patients do not always live in Aurora because nearby is the larger and better equipped city of Denver. The plan demands a higher degree of livability for Aurora in order to attract and hold these people.

Of the city's total area 23 percent was tax delinquent. The city plan has pointed the way toward putting this land back to use. Aggressive municipal departments are taking the unusable land and retaining it for public use, such as parks, flood protection, and other uses, and making the rest available for business and residential use.

The reaction of private enterprise to this work was immediate. Under the leadership of Mayor B. T. Howard, who continued the plans first begun by Mayor Alva Hill, the city is now moving toward new designs in its business district, and big stores are on the way. New residential developments of interesting character are springing up everywhere. A new park board is undertaking the development of a municipal park system.

Among the many other plans under consideration is an outstanding civic center of which a recreation building will be the first item. A new city hall planned for the future will become the central feature in this unusual plan. The arrangement is shown in the accompanying photograph. A recreation building, a library in the present city building, the new civic building, a swimming pool, outdoor playgrounds, bandstand and park, are all included. Aurora is going forward.



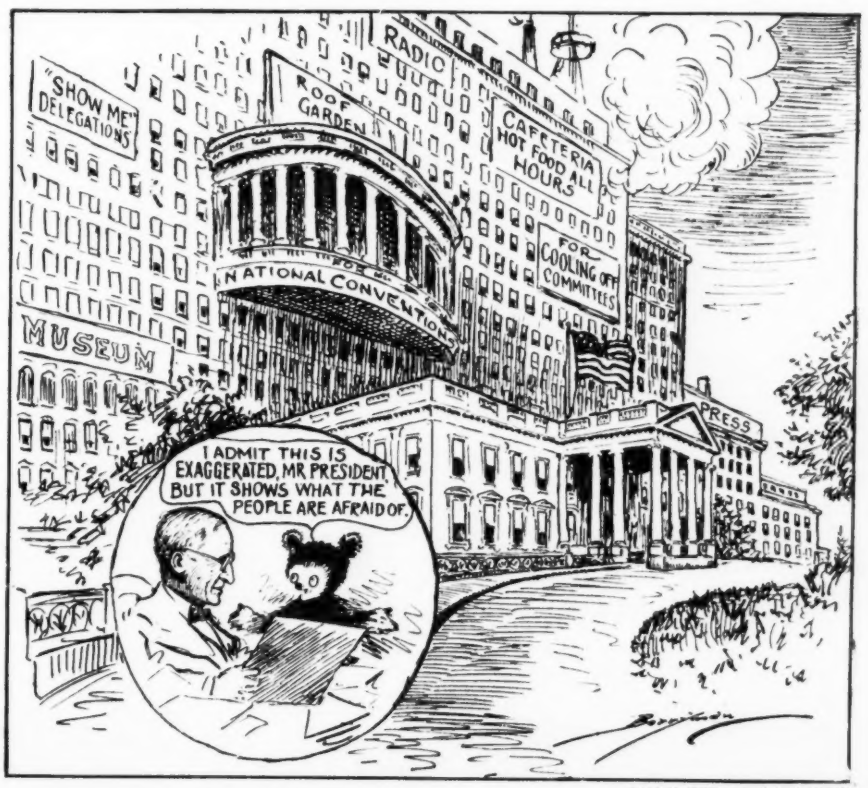
Proposed civic center for Aurora, Colo. Left to right: band shell, city hall, fire department, tennis courts, swimming pool, library, recreation building

The Threat to the White House

AT ITS annual Board meeting, on January 26, the American Planning and Civic Association added its voice to the growing volume of protest by national and local professional and civic organizations against the threatened additions to the White House. This project would add some 15,000 square feet of office space to the west wing of the Executive Mansion, including an auditorium, cafeteria, and other facilities, and would permit conversion of the east wing into reception rooms and a presidential museum.

A wise alternative, in the opinion of the American Planning and Civic Association would be the provision of permanent executive offices in the remodeled State Department Building, across Executive Avenue from the White House.

It seems possible that before this issue of THE AMERICAN CITY reaches its readers, Congress may have removed the threat to the beauty and dignity of the White House by rescinding the appropriation previously voted. If so, the accompanying cartoon published by the Washington *Evening Star* of January 18 will doubtless have helped.



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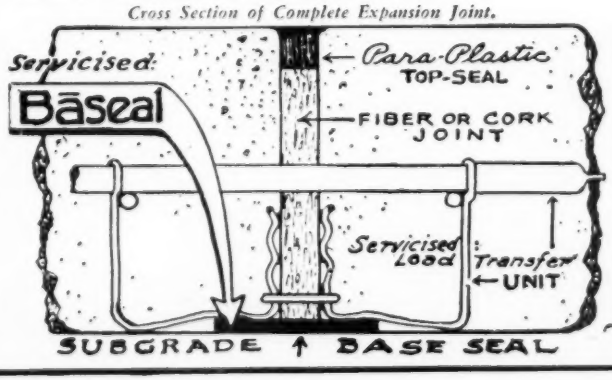

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Congressional Testimony on Stream Pollution Abatement

The Barkley-Spence Bill, HR 4070, designed to encourage the construction of sewage treatment plants, receives critical examination

Dr. Abel Wolman presents the viewpoint of the American Public Health Association, Federation of Sewage Works Associations, American Water Works Association on the Barkley-Spence Bill covering stream pollution abatement to the House Committee on Rivers and Harbors.

THE Chairman: At this time we will call on Dr. Abel Wolman, of Johns Hopkins University, Baltimore, Md.

Dr. Wolman: Mr. Chairman, my name is Abel Wolman. I am Professor of Sanitary Engineering, Johns Hopkins University, Consulting Engineer, and formerly I was Chief Engineer of the State Department of Health of Maryland for a period of about 18 years.

The Chairman: Were you not also connected with the National Resources Committee?

Dr. Wolman: I was Chairman of the National Water Resources Committee for about eight years. That committee reviewed the prime pollution problems throughout the United States in a series of three documents, and determined on the basis of that inventory and investigation of the situation throughout this country that the correction of the stream pollution problem would cost in the neighborhood of something less than two billion dollars. It allocated responsibility for the pollution to public agencies and to private industries. But it indicated that the pollution was of national interest, but not necessarily of national, geographical distribution.

Its recommendations at that time were roughly of this nature:

1. That it was desirable to create on a national or federal level a full time agency which would devote its energies to a study of this problem and the stimulation of research and the development of practicable means of correcting difficulties throughout the country.

2. It recommended also at that time grants-in-aid and loans, but not grants-in-aid to private industry in order to stimulate or increase the rate of correction or corrective action.

American Public Health Association

I should like to pass now to the attitude of another series of associations of a non-public or non-official character. I refer, first, to the position which the American Public Health Association has asked me to present. . . . It is an association composed of medical officers of health, engineers, laboratory workers, nurses, and others, and is generally representative at the professional level of public health workers of this country, the membership aggregating some 10,000. The Executive Secretary of that group, Mr. Chairman, has asked me to present for your record this brief statement: "In connection with the forthcoming hearing on H.R. 4070 the Federal Water Pollution Bill, I wish to advise you that the American Public Health Association, with the recommendation of its Engineering Section, has approved the above bill in principle, believing that it represents a sound solution of this very difficult problem."

Sewage Works Associations

Secondly, I should like to introduce into the record the position of the Federation of Sewage Works Associations; that in turn is a composite group of all those individuals interested in operating the great bulk of the sewage treatment plants in the United States. This is a professional group running all the way, in this type of work, from the level of the operators up to and including consulting engineers of this country. The action of its executive committee is as follows:

"The Board endorses the objectives of the Barkley-Spence type of bill, namely, the elimination of stream pollution throughout the United States; secondly, it endorses the principle of cooperation among the states and between the states and the Federal Government. Third, the Board endorses the principle that the states shall have the right to pass upon and give final approval to plans of proposed sewage treatment works; fourth, the Board recommends that the bill, as finally presented shall clearly set forth these principles, and it urges that the Spence type of legislation shall be adopted by the Congress." I think I can fairly say that it is the feeling of this organization that this type of legislation, in principle, is the most desirable that has come forward so far.

American Water Works Association

The American Water Works Association is the third agency which I wish to present for your consideration here, and I happen to be here as Chairman of its Committee on National Water Policy. It represents a group representing, I would say, those who have charge of the operation of virtually all the water supplies of the United States. It has a membership of somewhat less than 6,000. That association, and the National Committee on Water and Sewage Works Development, which is composed of the American Water Works Association, and the New England Water Works Association, and the Federation of Sewage Works Associations, and the Manufacturers of Water and Sewage Works Equipment, have all gone on record as agreeing to the general principles of the Spence type of bill, or H.R. 4070. The Executive Board, however, of the American Water Works Association requested me to add this reservation: although it agrees fully with the principles outlined in the proposed H.R. 4070, it would like to point out to the committee that it does consider at this time it is not essential for the development of stream pollution abatement in this country that we add any laws to provide these public agencies with financial grants-in-aid as a necessity. It takes the position that the states and the municipalities by and large are in better financial position than they have been in the last 25 years. They feel that the obstacle to the use of local funds for carrying out these undertakings is not as great as it would seem to be or it seemed to be in the period prior to 1939.

Mr. Pittenger: Does that represent a change in the position they have taken?

Dr. Wolman: That does represent a change in their position, and that position reflects to my mind the feeling of the executive committee, that the economic climate is considerably more favorable.

Cities Demonstrate Ability to Pay

Mr. Pittenger: If they feel that that is so have they any figures to bear that out? Can they point to any of these cities and municipalities who have paid off their bonded indebtedness and are rolling around in money now?

Dr. Wolman: They have these figures to show the changed condition with regard to many of these cities, but if we may start out at the state level,

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there are many states, offhand I am not suggesting how many of them, which have accumulated surpluses. I do know that many states are now operating at a profit. In a great many states such as Maryland, New York, Michigan, California, they have given grants-in-aid to local subdivisions during the last two years for plans and specifications and the necessary field surveys. They feel that the municipalities to a considerable extent—and we feel that the data will show that—are not on the borderline of either bankruptcy or of fiscal difficulty. They recognize fully that there are a number of municipalities, perhaps small ones, perhaps some large ones, which are in financial difficulty but we do not believe that predominates throughout the United States.

Municipalities' Financial Status Good

Mr. Angell: Have you made any estimate of the situation in the various states as to the condition in which they [cities] find themselves?

Dr. Wolman: We did not make any estimate in total, but I can say this: we can name cities where the problem is great, probably greater than I imagine in any part of the country, out in the Middle West, and those states are in good financial condition even when the cities are not, and they are backed up by cash reserves.

Mr. Angell: This same question has come up before at another time, and I understand it to be a fact. Dr. Wolman, that two and a half billions of dollars are in cash reserves in the states. Would you say that is an exaggeration?

Dr. Wolman: I imagine that is not an exaggeration.

Mr. McDonough: What is your point of view? Are you advocating any grants-in-aid yourself, or merely expressing the opinion of these associations?

Dr. Wolman: My personal opinion is that the Spence Bill in its present form could be passed with a reservation that the appropriation is left in the hands of Congress, and it would be satisfactory.

The Chairman: It is left there anyhow.

Dr. Wolman: It would be my personal recommendation that this stimulus in the form of grants-in-aid and loans should not be brought into action until there is a real national reason for it, namely, unemployment, and under conditions of stress.

Mr. McDonough: Would it be wise, in your opinion, to study the aids to the states, setting up those aids to the states and counties only, and the cities perhaps in certain categories, but leaving to the Federal Government the position of coming in as a last resort, but nevertheless leaving it in the bill?

Dr. Wolman: Let us look at it historically. For example, here we find Pittsburgh, which is not bankrupt, why did they not do something? Why did they go through this whole period from 1933 to 1938 when grants-in-aid were being used by many municipalities throughout the country? Why did the Philadelphia metropolitan area do nothing? My point runs to the fact that grants-in-aid alone, although they act as a stimulus, did not solve the problem.

The Chairman: If some inducement were offered to them would it not be cheaper to do it that way rather than have to resort to extraordinary means to get it accomplished?

Dr. Wolman: I want to avoid extraordinary means if at all possible. But I want to strive to put private enterprise into a class where it will stand on its own feet. Prior to the depression the rate of construction of sewage pollution abatement plants on a municipal level was very good.

The Chairman: Prior to what year?

Dr. Wolman Prior to the depression of 1933. It went on for a period of some twenty years at the average rate of $100,000,00 up to $150,000,000 per year, and grants-in-aid, in principal, lifted that up during that short period of time to something approaching $250,000,000 to $275,000,000 per year. If Congress feels that this particular enterprise should be lifted up in order to accelerate the rate of installation, I think the grants-in-aid method will do it.

The Chairman: Do you think that it ought to be accelerated?

Dr. Wolman: I am not as heavily convinced that it is a major problem that confronts the local taxpayers. I will say this—

The Chairman (interposing): If I may interrupt you, if you do not think that, what do you think about the situation?

Dr. Wolman: I am counting on the fact that if you have a Federal agency

Higher Water Rates Declared Valid for Out-of-Town Users

A COURT decision of interest to municipal officials has validated the right of the city of Yakima, Wash., to charge higher rates for water it delivers outside its corporate limits than for water delivered to city residents, the American Municipal Association reports.

The decision was handed down June 14 in the case of *Nob Hill Water Company* v. *City of Yakima*. The court held that the differential in rates must be based on financial and physical aspects of the water system operation. It also held that the city had a right to discontinue furnishing water outside the city limits.

The case dates back to 1901 when the Nob Hill Water Company was formed to receive water from the water utility serving what is now a part of the city. The company was also to distribute water to persons living outside the city. In 1926 the city acquired the utility and has been supplying the Nob Hill system since then. During most of this period the city has maintained the same water rates for both its resident customers and the customers receiving water through the Nob Hill mains.

Early in the 1940's, however, the city established higher rates for non-residents. Certain representatives of the non-residents, together with the Nob Hill Water Co., filed a suit contesting the right of the city to maintain the differential in water rates. The city filed a cross petition for a judicial declaration that it was no longer obligated to deliver water into the Nob Hill system.

On the basis of the evidence, the court concluded that the water customers inside the city limits had borne the whole financial burden of acquiring the system through property taxes. They also concluded that the ill-repair of the Nob Hill system was wasting an abnormally great portion of the water which the city was delivering into the system, and that the city was receiving no compensation for any of this wastage. In addition, the costs of billing and collecting water charges were higher for Nob Hill customers than for those in the city.

On the basis of these conclusions the court held that the differential in water rates for residents and for non-residents receiving water through the the Nob Hill system was justified. The court also held that the city had a right to discontinue out-of-town service, upon the giving of reasonable notice of such intention.

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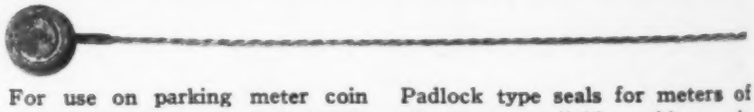

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which pesters them continuously and sends in regular reports back to Congress at regular intervals, and keeps this before the public eye, and insists on corrective measures, I think you will get somewhere with them; but the grants-in-aid principle, which is not applicable to the private industry leaves that large block of the problem still to be solved.

Stream Pollution Detrimental to Human Life

Mr. McDonough: Dr. Wolman, is it true that pollution is more detrimental to human life than it is to wild life, ordinarily?

Dr. Wolman: I would say the risk is greater to human life. I listened to Dr. Gabrielson's talk last week up in Cumberland, at the Conservation Forum, and he said it was his judgment that the greatest deterrent to wild life rehabilitation in this country was not pollution, but soil erosion.

Mr. McDonough: Do you think the risk to human life is equal to or comparative to the loss that we would have by reason of the non-enforcement of quarantine for diphtheria and scarlet fever and other contagious diseases and other types of diseases of that character?

Dr. Wolman: I think the analogy is not quite as simple as that. In the case of quarantine you might be dealing with a mass group temporarily, and have a minimum of your emergency objective which would be localized to that particular mass for a certain period of time. On the other hand, a regulatory procedure blanketing the United States, in which offenders would have to be called before the court of justice, where prior to the case elaborate technical investigation would have to be made in order to make the case, has little or no analogy to a quarantine.

Mr. McDonough: Do I understand from your statement that additional legislation on stream pollution is not necessary, that we have works and devices to correct stream pollution if they are applied?

Dr. Wolman: Where the rate of application could be very materially improved over a very slow rate. It requires, to my mind, moving along a front of stimulation, of research, of education, of fiscal policy, and of political structure, referring again to problems such as the situation in the Pittsburgh area, where you have, regardless of whether you have grants-in-aid or not, a very difficult residual problem of getting a body which can exercise the function about which we are talking. It is not in existence.

Mr. McDonough: That is more the reason for the federal government to step in.

Dr. Wolman: Yes, I agree that the principles, exclusive of finance, are a desirable step to take at this time.

Mr. McDonough: Is the pollution of streams in this country increasing or decreasing?

Dr. Wolman: I would say that since the war it has increased materially, because it must be remembered that since 1941 there has been virtually no construction done, either in public or in private industry in this field. Up to that time, it was moving along at a fairly rapid rate on the public side.

I wish it were possible to say to the committee, after 28 years of struggling with this particular field, at various levels of government—municipal, state, and federal—that there was an easy road to the solution. I have not got it.

High Operating Results at a Small Sewage Plant

REDUCTION figures running as high as 98 percent for 5-day BOD and suspended solids counts typify operations at the small Gulf Shores housing project near Panama City, Fla. The plant serves a community of 312 family units and the strictly domestic sewage waste requires a high degree of treatment since the wastes are discharged in an area adjacent to swimming facilities.

Aerifier for Secondary Treatment

For this purpose, Smith and Gillespie, consulting engineers who designed the project, used the Yeomans Aerifier activated sludge system to give secondary treatment to the settled sewage effluent. This treatment consists basically of a Spiralflo aerator, adjustable loading funnels, angular corner clarifier compartments, an automatic return for the activated sludge to the aeration tank, and an automatic return of excess activated sludge to the primary tank.

The sewage receives primary treatment in a standard rectangular settling tank that provides 1½ hours detention. The settled sewage then goes to the Aerifier, a box-like structure with a recirculating unit in the center. This unit draws the settled sewage from the bottom of the tank and sprays it across the surface at the top in a rotary motion, thereby giving the sewage contact with the air. Draw-off ports transfer part of the aerated sewage to small hoppers at each corner of the aeration tank, and a similar port returns the excess to the primary settling tank. The sewage in the small secondary clarifiers deposits its sludge in the tank whose shape allows the sludge to return to the aeration compartment by gravity, thereby completing the activated sludge cycle.

Showing the spray aerator in action at the Panama City plant. The corner clarifiers used in this compact installation also are visible

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German Water and Sewage Plants Examined by U. S. Technicians

GERMAN water supply practice in general was excellent and had many features that while not new might well be examined in United States; sewage treatment, conversely, showed no new developments not already known in this country and lagged behind in the use of mechanical equipment. These points were brought out in two papers delivered at the recent American Society of Civil Engineers' annual meeting held in New York. Arthur E. Gorman, former director of the Water Division of the OWU, analyzed German water supply; and Dr. Anthony J. Fischer, Sanitary Development Engineer, the Dorr Co., discussed sewage treatment.

German Water Works Operators Good

German water works as a rule had good operators even though the plants might not have been in such good condition. Plant operators conscientiously stayed on the job and made an earnest effort to produce a satisfactory water even when bomb damage occurred.

Some of the water supplies utilized dug wells up to 100 feet in depth and spaced 60 to 100 feet apart. The wells were lined with stone, brick, or precast concrete and had copper alloy screens, although war restrictions forced the use of cast iron or steel screens covered with rubber. Ceramic screens also came into use during the war and gave excellent results. Steel casings were used in deep wells and the water was drawn by submerged pumps.

The Germans also made extensive use of infiltration galleries that were well constructed. The gallery would be generally backfilled with rocks and gravel and at the surface concrete basins filled with sand made it in effect a huge slow sand filter for recharge of the gallery.

Among the installations that particularly impressed Mr. Gorman was one installation in Munich consisting of number of tunnels, each seven feet in diameter built into a hill intercepting veins of water. The tunnel, lined with stone and concrete, produced water of excellent quality with a temperature of approximately 47°F.

Nuremberg also had an interesting installation. German engineers removed 25 feet of swamp ground be-

PHOTOS BY DR. A. J. FISCHER

TOP LEFT: *Modern water supply—German style. This multi-valve outlet allows householders to bring buckets or other containers and supply themselves with water by the "fill and carry" method. The picture was taken in Essen. The buildings in the foreground are the district offices of the Ruhr Sanitary District.*
TOP RIGHT: *This is a typical two-man shelter found in German water works. This was located at Stele and the man inside is Arthur Gorman. The round shape gives excellent protection during bombing; none was found in a damaged condition.*
CENTER LEFT: *The Berlin aeration tank in the activated sludge plant suffered heavily from bomb damage.*
CENTER RIGHT: *This is a typical distribution point for sludge gas that finally found use in automobiles. These distribution cylinders carry gas at 350 atmospheres. The photo was taken in Berlin.*
LOWER LEFT: *This huge Bremen water tank stood up remarkably well under bombing. One hit, evidently from a small bomb, destroyed the top of the tank, otherwise it was in good condition. The tank is 250 feet high.*
LOWER RIGHT: *A close-up of the damage done to the water tank at Bremen*

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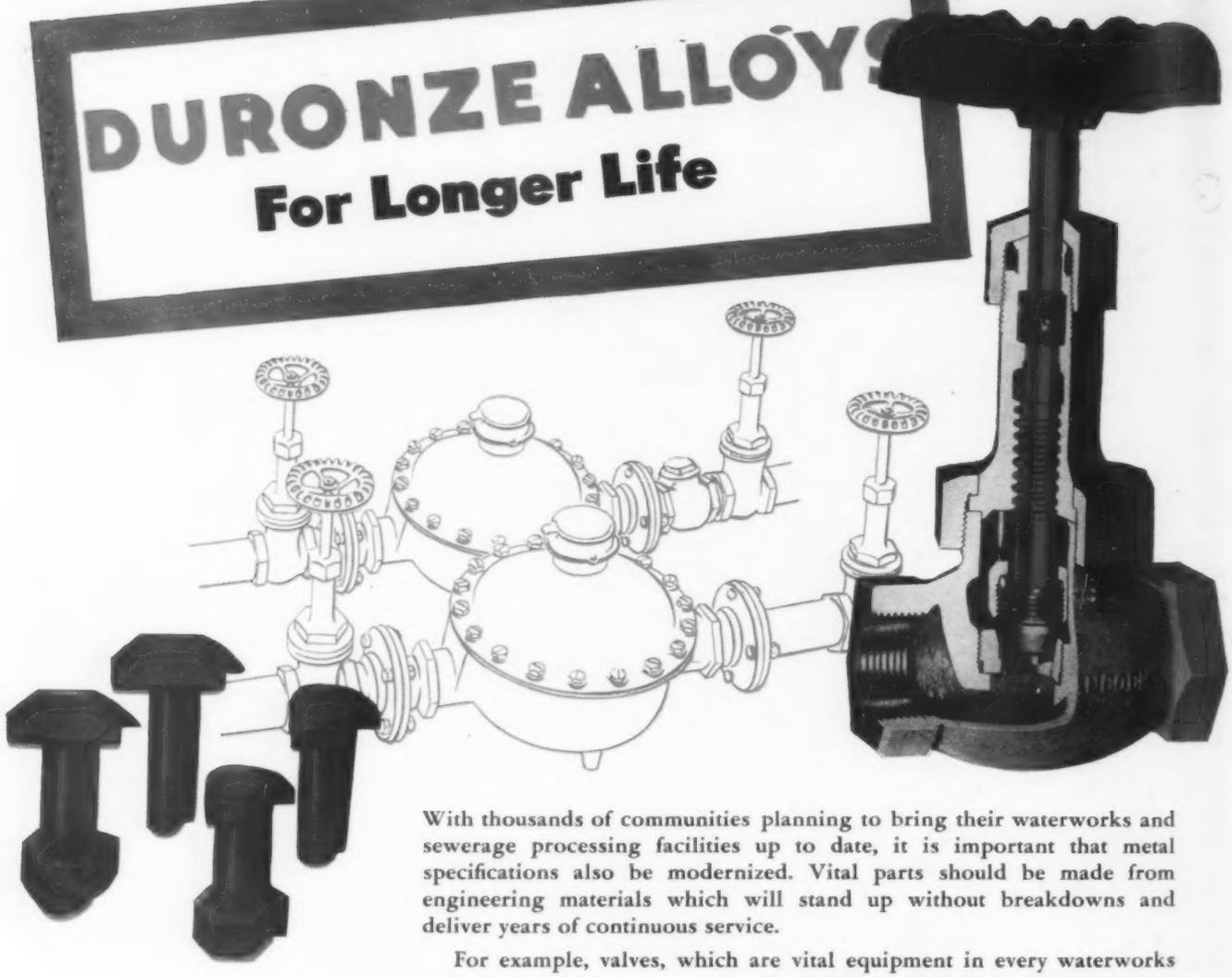

With thousands of communities planning to bring their waterworks and sewerage processing facilities up to date, it is important that metal specifications also be modernized. Vital parts should be made from engineering materials which will stand up without breakdowns and deliver years of continuous service.

For example, valves, which are vital equipment in every waterworks and sewerage plant, are more dependable and will last longer when stems are made from high-strength, corrosion-resistant Duronze (silicon bronze and aluminum bronze alloys).

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tween hills and backfilled this with gravel, covered it with concrete and camouflaged the entire area skillfully. The water that the area produced was of excellent quality and required no subsequent treatment.

As protection against bombing and falling debris reinforced concrete covers were supplied for all major pumping units. Operators all had shelters for their own protection.

Carbon Dioxide Caused Trouble

Some ground water was high in carbon dioxide, consequently practice was to treat by the milk of lime method. German engineers removed iron by aeration in towers as the water flowed downward over open staggered brick followed by settling slow-sand filtering. Manganese was removed by passing the water over calcinide dolemite filter media imported from Russia. Mr. Gorman reported that he saw no public softening plants in Germany. Regarding filters, there were a large number of the pressure type, particularly in war plants. All slow sand filters were open and not camouflaged except for one installation at Bremen, and that was well camouflaged. Rapid sand filters utilized a depth of approximately twice that used in this country with a unique underdrain and backwashing system involving use of water and air. Filter media consisted of 12 inches of coarse gravel, 10-12 inches of medium sand-gravel and 45 inches of sand.

Pipe galleries and filter controls showed good engineering design. German practice was to let one control table serve four filters. Equipment also included a recording mechanism. At one plant the photoelectric cell principle was used to record turbidity of the filtered water.

Chlorination was not as well supervised as in the United States. Berlin utilized 0.6 ppm chlorine with a 2:1 ratio of ammonia to chlorine and produced some residual. Other cities applied 0.1 to 0.2 ppm chlorine.

Underground reservoirs were impressive with their glazed tile lining, excellent lighting, and convenient inspection gallery. Mr. Gorman stated that they far surpassed anything he had seen in this country.

A unique feature of the distribution mains and all underground utilities, for that matter, was the use of signs at strategic intervals with data on them so that the utilities could be located easily.

Damage to mains was heavy. Essen, for example, had 1,000 kilometers of mains and suffered 2,000 breaks. Munich, with 1,700 kilometers of pipe, withstood 1,860 breaks. Cast iron pipe usually broke at the joints so that repairs were fairly easy; steel pipe would rip and produce a much more difficult break.

Sewage treatment plants, Dr. Fischer stated, seemed to be operated not so much for the elimination of stream pollution as for the production of digester gas for driving autos and the recovery of valuable elements in the trade wastes. The plants generally were in poor shape and poorly operated.

Bar screens were mechanically cleaned but the screenings were not ground. Grit was removed, if at all, by plain long tanks cleaned by hand or bucket elevators. There was a limited use of upflow and tangential feed circular grit chambers.

Settling tanks, were characterized by large sludge hoppers. Primary tanks were mechanically cleaned with Meider scrapers in the rectangular tanks, and pitched blade and spiral scrapers in the round tanks. In one particular type of tank, the Prass, the effluent is removed through a series of telescoping outlets arranged around the tank periphery with the top of the outlet held at a predetermined level below the effluent surface by floats.

One interesting plant which was designed by Dr. Karl Imhoff was laid out in three groups. One or more of these groups furnished a treatment that produced a high degree of nitrification. The effluent would then be recirculated to the raw sewage, the purpose being to make treatment easier and minimize odors.

Trickling filters were customarily equipped with two or four rotary arms; filter media were customarily 9 to 12 feet deep; underdrains were of precast concrete. Some enclosed filters used forced down draft at three to four times the usual rate but Dr. Fischer was not impressed with the results. No plants were seen recirculating effluent.

Chlorination was not practiced because chlorine was difficult to obtain. Chemical treatment was rare.

Unique Chemical Treatment Plant

One outstanding chemical treatment plant was located at Niersverband and utilized carbon dioxide and iron filings for preliminary treatment before activated sludge. The process consisted of carbonization of the sewage with stack gases, mixing and flocculation with reduced iron sludge, settling, contacting the clarified sewage with iron filings, and then activating in two stages. The treatment reduces the BOD from 1,400 ppm to 10-12. Biological reduction and re-use of the iron sludge decreased the coagulant requirements to 15 ppm.

Practically all digestion tanks were heated by some source other than digester gas, such as coal or oil, in order to collect the gas and use it in autos and trucks. German engineers gave consideration to the digestion of farm and other organic wastes for gas production and had made pilot plant tests of packing house wastes. This gas when compressed and ready for use in cars, Dr. Fischer stated, would cost, exclusive of amortization of equipment, the equivalent about ten cents per U. S. gallon. Total costs, including amortization, ran this t oa minimum of 30 cents per U. S. gallon.

Few plant records were available. Plant operators were not kept informed on flow data or results. Testing was done generally at central laboratories in sanitary districts.

Mr. Gorman and Dr. Fischer made the investigations as part of the Technical Industrial Intelligence Committee, known as TIIC, a subdivision of Combined Intelligence Objective Subcommittee, known as CIOS. Other members included A. V. Sheridan, Commissioner of Public Works, the Bronx, N. Y., and Lt. Col. Joe Gilbert, Mayor Myron Tatlock, and Lt. Harold Pfreimer of the Sanitary Corp.

Lloyd Clark Returns to North Dakota Post; He Re-stored Manila's Water System

LT. COL. LLOYD K. CLARK resumed his duties as Director of the Division of Sanitary Engineering, North Dakota State Health Department in December. K. C. Luaster was Acting Director during Colonel Clark's absence, but went on active duty with the U. S. Public Health Service last July 29.

Mr. Clark served with the Army Sanitary Corps in the Seventh Service Command at Omaha, later in the Surgeon General's Office in Washington, and subsequently in the Pacific theater. His duties included the construction of water supply and treatment works in New Guinea and the Philippines. In Manila he was in charge of the rehabilitation of the city's water system during the first two months of occupation. Under his direction the water service was restored to most of the consumers fifteen days after it was left damaged by the Japanese.

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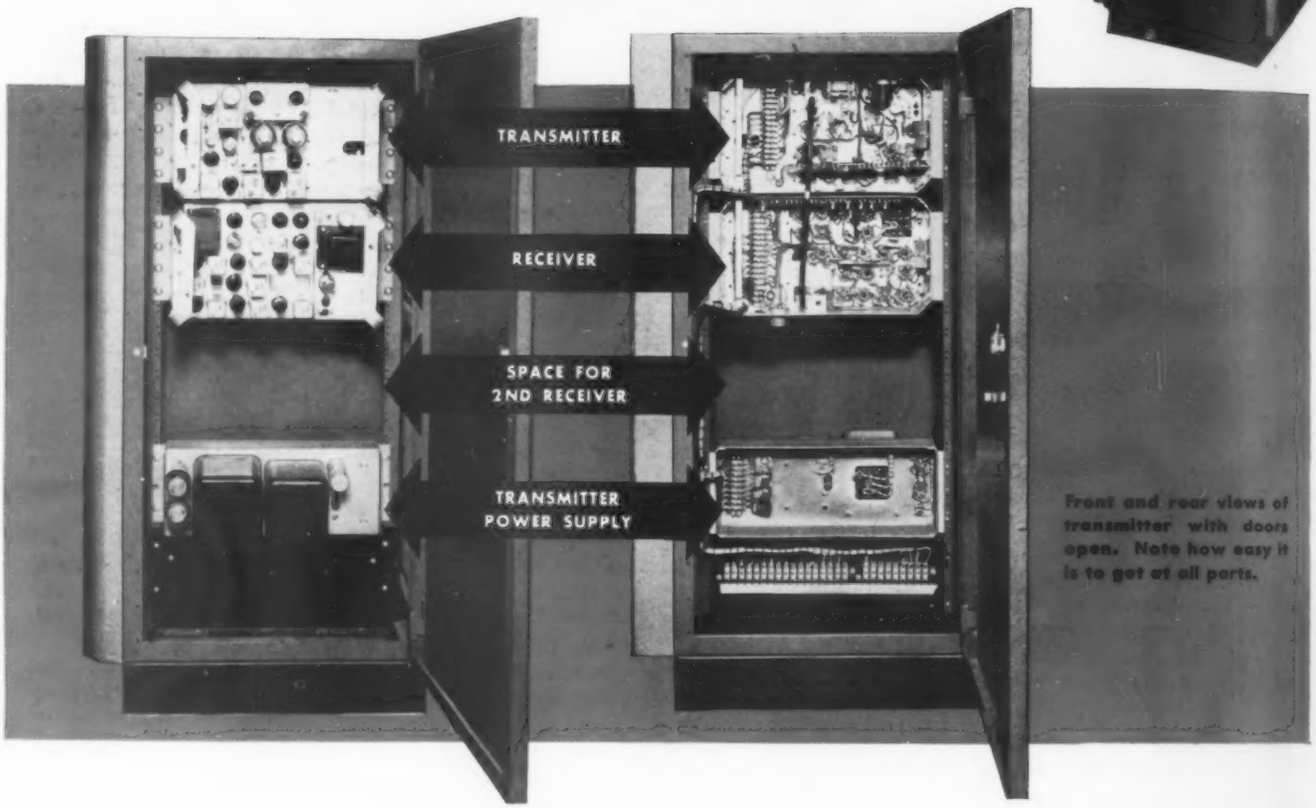

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ENGINEERING PRODUCTS DIVISION, CAMDEN, N. J.

Recent City Manager Appointments

W. E. Alworth, planning engineer of Oakland, has been appointed city manager of Palm Springs, Calif.

J. F. Daniel, city engineer, has become acting city manager of Panama City, Fla.

Lt. Commander Donald C. Egbert has returned to his post as city manager of Birmingham, Mich. Harold Corson, who has been acting during his absence, returns to his post as city engineer.

Fred D. Farnsworth, city manager of Ft. Fairfield, Me., 1927-32, Brewer, 1932-41, and Bangor, 1941-43, and more recently with the Federal Public Housing Authority, has been appointed first city manager of Rockland, Me., effective January 1.

W. D. Fowler is manager of Clovis, N. M.

Richard Giles, recently released from the armed forces and previously with the West Texas Utilities Co., has been appointed city manager of Stamford, Texas.

LeRoy F. Harlow, city manager of Sweet Home, Ore., from 1943 to July 1945 and at present on the staff of Public Administration Service, has been appointed city manager of Albert Lea, Minn., to take office on March 1.

Harold M. Hines, who has been assistant manager for the past two years, has been appointed city manager of Pasadena, Calif., succeeding C. W. Koiner, who retires on February 14.

V. R. Smitham, Dallas, Texas. Announcement of the appointment of Mr. Smitham and Major Boyles (right) was in the January issue

Leo Huth of San Antonio, has been appointed city manager of Brownsville, Texas, effective January 1. He succeeds O. J. S. Ellingson.

Edwin Johnson, city clerk, has been appointed acting city manager of Berkley, Mich.

R. E. Keagle, city manager from 1928 to 1932 and from 1934 to 1938, has returned to the post as city manager of Haines City, Fla.

Dave King, city manager of Harbor Springs, Mich., from 1937 to 1940, and of Berkley, Mich., since January 1945, has become first manager of Key West, Fla.

Colonel William F. Ladson has been appointed city manager of Moultrie, Ga. G. A. Shaver, who has been serving as manager, is returning to his former post as city clerk and treasurer.

Robert Craig Montgomery, manager from November 1944 to May 1945, has been reappointed city manager of Yonkers, N. Y., by the incoming city council.

Major Jesse V. Boyles, Bartow, Fla.

Paul Morton, city manager of Alexandria, Va., 1925-29, Petersburg, Va., 1929-31, Lexington, Ky., 1932-35; Trenton, N. J., 1935-37, and more recently attached to the mayor's office at Louisville, Ky., has been appointed city manager of Knoxville, Tenn., effective January 1.

Donald E. Egkert, Birmingham, Mich.

James Nagle, public utilities director, has been appointed acting city manager of Houston, Texas, effective January 2. John N. Edy, manager since 1943, has resigned to enter private business.

Robert W. Palmer, city manager of Ashland, Me., 1935-1941, Fort Fairfield, Me., since 1941, has been appointed first city manager of Old Town, Me.

Major Arthur B. Sullivan has been appointed city manager of San Mateo, Calif., effective January 16. He succeeds William B. Soule who resigned to enter private business.

Clyde E. Swank, city manager of Panama City, Fla., since 1940, has been appointed city manager of Fort Pierce, Fla., effective February 1. He succeeds B. Arnold.

Mark A. Trafton has reconsidered his resignation and has decided to continue as manager of Presque Isle, Me.

Clarence E. Ridley
Director
International City Managers' Association, Chicago, Ill.

The Municipal Bond Market

In reviewing the municipal finance picture for 1945 and previewing 1946, the Municipal Finance Officers Association points out that interest rates on municipal bonds, now near an all-time low, are not likely to get much higher in 1946, except as influenced by federal tax policy. The volume of bonds is beginning to increase but will not reach its peak for many months.

Some sales of new issues as reported in the January issues of *The Bond Buyer*:

Amount	Borrower and Purpose	Rate (%)	Term (Years)	Basis (%)
$100,000	New Britain, Conn., Sewer Fund, Nineteenth series, first issue	.80	2-11 Ser.	.787
143,000	Olean, N. Y. (City and Town) Union Free Sch. Dist. No. 1	.90	8.16 Avg.	.885
2,375,000	Minneapolis, Minn., Refunding	1.0	5.5 Avg.	.96
500,000	Indianapolis, Ind., Airport Development	1.0	10 Avg.	.831
201,000	Nashville, Tenn., Street, Alley, and Sewer of 1945	1.0	20 Avg.	.979
350,000	Webster Groves, Mo., Public Improvement	1.0	10.66 Avg.	.961
285,000	Elizabeth, N. J., Almshouse	1.20	14 Avg.	1.175
330,000	Delaware, Ohio, City School Dist.	1.25	12.33 Avg.	1.13
2,186,000	San Antonio, Texas, Ind. School Dist.	1.30	9.25 Avg.	1.279
1,500,000	Alexandria, Va., Public Improvement and Funding	2.0	20.83 Avg.	1.268
340,000	Oklahoma City, Okla., School Dist.	2.50	3-6 Ser.	1.5078
500,000	San Francisco, Calif., Sewer, Series A	3.0	1	.5557

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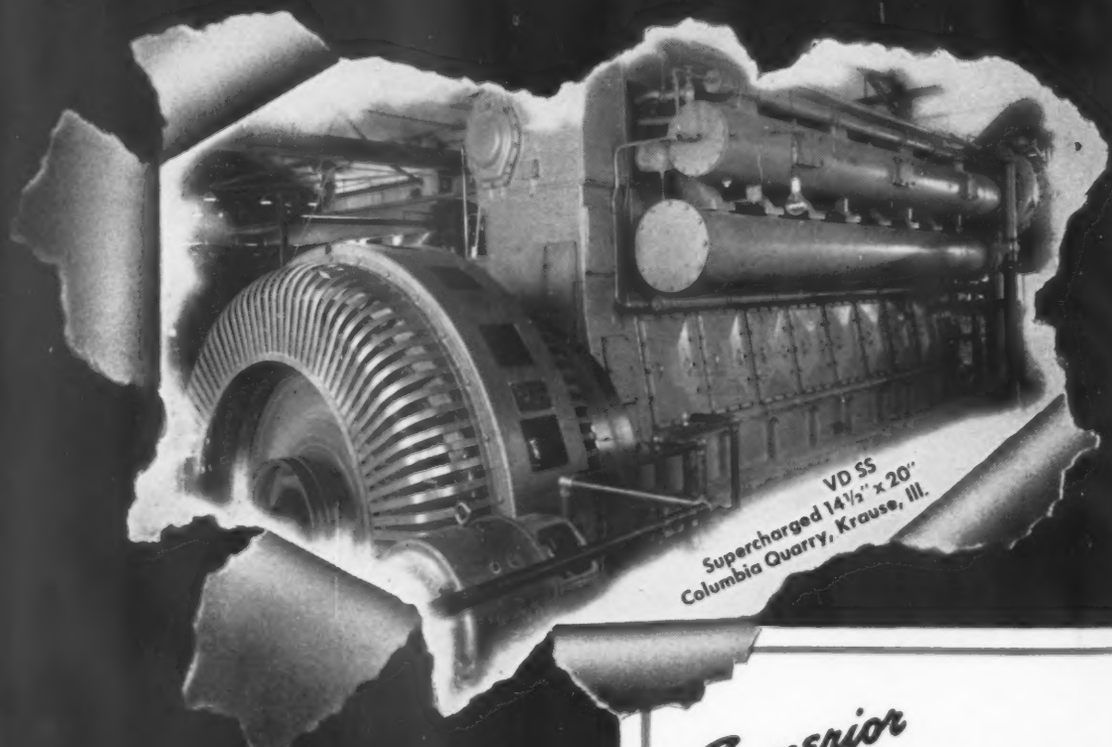

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Municipal Law Notes and Decisions

Prepared by NATIONAL INSTITUTE OF MUNICIPAL LAW OFFICERS, Washington, D. C.
Charles S. Rhyne, *Executive Director*

Recent Decisions on Labor Union Contracts and Municipalities

ON NOVEMBER 28, 1945, the Court of Appeals of Maryland rendered its decision in the case of *Mugford* v. *Mayor and City Council of Baltimore* which affirmed the decision of an inferior court on the right of the Central Payroll Bureau of the City of Baltimore to collect and remit dues to its employees to their union representative. The purpose of the original suit which was filed by taxpayers in Circuit Court No. 2 of Baltimore was (a) to declare void the agreement of April 8, 1944, between the Department of Public Works then acting for and on behalf of the City of Baltimore and the Municipal Chauffeurs, Helpers and Garage Employees Local Union No. 825, a subordinate Local Union of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, affiliated with the American Federation of Labor; (b) to enjoin and restrain the defendants from extending any preferential advantage or privilege to the union or its employees; (c) to enjoin and restrain the city from making any deductions from the wages or salaries of employees of the city, for the payment of union dues of such employees to the union; and (d) to secure such further relief as the case may require.

Check-off of Dues

The lower court sustained the contentions of the taxpayers in all but one respect. It invalidated the contract of April 8, 1944, between the Department of Public Works and the union and permanently restrained the city from carrying it out and from "making and carrying out any other agreement with the defendant union granting to such union and its members, preferential advantages of any character over other employees of the city of Baltimore." But in the matter of the check-off of dues, the lower court said that its decision "shall not forbid the collection and remittance of such dues by the Central Payroll Bureau upon a *purely voluntary* basis, terminable by any employee at any time in any future contract between the city and the defendant union." (Italics supplied.) Upon this holding the taxpayers appealed and upon it the Court of Appeals stated:

"If a city employee voluntarily asks the Central Payroll Bureau to deduct from wages due him and remit the same to a person, partnership, or corporation, reserving to himself the right to discontinue such payments in the future, it would seem that the city could comply with the request."

The decision continues by adding the qualification that the general regulations of the Central Payroll Bureau would have to permit such check-off and by calling attention to the fact that similar privileges had been extended to all its employees in regard to subscriptions to War Loans, the Red Cross, pensions, and charitable funds.

The Court did insist, however, that the request for the deduction must come in the first instance from the individual employee and added that should it initiate with the union, "the arrangement would be open to objection as a delegation of governmental power, and would extend a preferential advantage to the union." For general discussion, see report of Committee on City Officer and Employee Problems Created by the War of the National Institute of Municipal Law Officers, reproduced in "Municipalities and the Law in Action" (1945) pp. 281-292.

Thus, the highest court of the State of Maryland followed the other decisions of 1945 in the field of relationships of labor unions with municipalities. A later agreement between the city of Baltimore and the union which does not extend preferential advantages or privileges to the union has not yet been subjected to attack in the courts. This contract eliminated the objectionable features of the one invalidated, as it permits bargaining by any union and not merely the one with whom the contract was executed.

Cleveland and Dayton Cases

Two other court decisions last year added to the material which is gradually coming out in this field of municipal employee problems. The first was a decision on February 1, 1945, in the case of *City of Cleveland* v. *Division* 268, etc., by the Court of Common Pleas of Cuyahoga County, Ohio, holding that: (1) The Cleveland Transit Board is without authority to commit itself by agreement with a union to compulsory arbitration of disputes between it and the union; (2) the Board is without power to recognize the union as the exclusive bargaining agent for Board employees; (3) the Board is without power, in the absence of any statutory or charter provision, to enter into any collective bargaining agreement with a union; and (4) the fact that the Board operates the street transportation system of Cleveland in a "proprietary" capacity does not affect this question, as the Board lacks legal power to sign such labor union agreements.

Compulsory arbitration of disputes between the Transit Board and the union was dismissed by the Court as "a vain and futile thing for the Transit Board to refer the issues to arbitrators who, with the best intentions, but in ignorance of the civil service law, might make an award which it would be legally impossible for the Transit Board to accept. On the other hand, the Transit Board in all its dealings with employees is presumed to know the civil service laws as well as other charter provisions, and is bound to be governed by and apply them."

On the creation of the union as the sole and exclusive bargaining agent for all employees of the Transit Board, the court stated:

"Assuming that the Transit Board has the power to enter into a contract with a union, it seems to this Court that the Transit Board is entirely without authority to include therein an agreement, designating Division 268 as sole and exclusive bargaining agent for all employees including those who are members of other unions. The fact that Division 268 has as members a majority of the employees is immaterial. Such a law or enabling act passed by the State Legislature or City Council would be unconstitutional. It would be tantamount to forcing all employees to become members of the favored union, and would be unlawful. . . ."

As to whether the Board had authority to enter into a collective bargaining agreement with a union in the absence of any statutory or charter provision, the court pointed out that:

"Under Section 113-3 of the charter, the Board 'shall have full and complete supervision, management and control of the Transit System including' wages and working conditions 'subject to the general provisions of the charter.' Also 'the Board shall act by resolution.'

"Policemen and firemen have their wages and compensation fixed by Council ordinance, not by contract. Appointments to and promotions in the service are governed by civil service laws. The Transit Board in establishing rules and regulations by resolution for employees of the Transit System has no more authority to enter into a contract with its employees than has the Council in fixing compensation for firemen and policemen or other employees of the city."

The Court also cited Report No. 76 of the National Institute of Municipal Law Officers, issued in August 1941, entitled "Power of Municipalities to Enter Into Labor Union Contracts—A Survey of Law and Experience." See 10 *Municipal Law Journal* 22 for a digest of the 56-page opinion in the Cleveland case.

Decision on Dayton Ordinance

The second decision was handed down by the Common Pleas Court of Montgomery County, Ohio, on June 1, 1945, and provides an interesting comparison with the Baltimore case above. In this case, the court held that an ordinance of the city of Dayton requiring the City Director of Finance to deduct union dues from the earned wages or salaries of such city employees who had executed voluntary written assignments therefore is only legal and valid if the expense of making such deductions is paid "from sources

(*Continued on page* 143)

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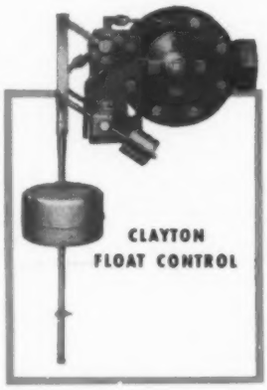

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Zoning and Planning Notes

Edited by FRANK B. WILLIAMS
Author of *The Law of City Planning and Zoning*

Refusal of Permit on Account of Pending Amendment of Zoning Ordinance

LOUISIANA.—*State ex. rel. Fitzmaurice* v. *Clay, City Clerk, and others, officials of the City of Opelousas*, Supreme Court, June 30, 1945, reported in 23 So. 2d, page 177.

This is an action by Fitzmaurice to compel the City of Opelousas to issue to him a permit for a filling station. The applicant's property is situated on an unrestricted commercial area, where there are no zoning provisions forbidding filling stations. The refusal of the city is based upon a resolution of the Board of Aldermen directing the City Clerk to refuse a building permit for commercial buildings in the area in question pending final action on a petition for a zoning ordinance of property owners holding real estate within the area.

The city admits that there is no ordinance restricting this area; but asserts that there is an ordinance pending making the area a restricted residential district, action on it being deferred until the receipt of a report from the Zoning Commission on it. This report was subsequently filed.

On the date on which judgment was rendered in this case in favor of Fitzmaurice, in the lower Court, the city had not adopted a zoning ordinance, nor has any such ordinance passed since, although five years have elapsed since the petition of property owners for such an ordinance was made, and almost five years since Fitzmaurice made his application for a building permit. The Court therefore holds that Fitzmaurice is entitled to his permit.

In argument, a case was cited in which at the time of the application and beginning of suit, the area in which the property was situated was not validly zoned. However, before judgment was rendered in the lower court, a valid zoning ordinance was adopted. That Court held that the permit should be refused; for "because a person applies for a permit at a time when it might be lawfully granted does not give him a vested right to the permit. An ordinance therefore may be validly passed after the making of such application which would prohibit the issuance of the permit."

With that case this Court agrees; but points out that it does not apply to the present case, in which no such ordinance was ever enacted.

EDITOR'S NOTE.—This case is contrary to the older decisions, under which the building inspector must issue the permit, in accordance with the law as it is at the time the permit is applied for. (Bassett, "Zoning," page 110.) Later cases, however, as a rule are in accord with the present case. The decision sometimes turns upon the fact that the remedy asked for is to compel the public official to issue the permit, and the remedy being discretionary, the Court does not deem it to be in the public interest to create a non-conforming use, and refuses to compel the issuance of the permit which will create one. For the later cases, see

TEXAS.—*Armor* v. *University Park*, 142 S. W. 2d 706. THE AMERICAN CITY Zoning Notes for January 1941, and the cases there referred to.

NEW YORK.—*Dubow* v. *Ross*, 22 N. Y. S. 2d 61, THE AMERICAN CITY Zoning Notes for May 1941.

Residential District—Permit for Excavation—Removal of Top Soil

CALIFORNIA.—*Ex parte Angelus, District* Court of Appeal, August 8, 1944, reported in 150 P. 2d 908.

In one corner of the City of Oakland is a subdivision called Sheffield Village, which has been zoned as residential. Here Angelus purchased about thirty acres, and began the excavation of about 900,000 yards of top soil and rock to be removed in trucks. The primary purpose of this excavation was commercial.

An ordinance of the city required a permit for excavations. Angelus applied for and was refused such a permit.

The court sustains the ordinance in this case, finding that in this locality the undertaking would result in objectionable noise and turmoil; would cause dust; would scatter rocks on the highways; would destroy these streets not built for such heavy traffic; and would create an eyesore by reason of the canyons made by the excavations.

Residential District—Hospital

KENTUCKY.—*Crain* v. *City of Louisville*, Court of Appeals, May 26, 1944, reported in 182 S. W. 2d, page 787.

This is a proceeding to prevent Miss Crain from operating what she calls a hospital or nursing home. In the zoning district in which it is located, two-family dwellings, multiple dwellings, boarding houses, hospitals and institutions of a philanthropic nature are permitted. The city claims that Miss Crain's institution is not a hospital, and that a nursing home is not admissible in this zone. The court finds that the institution is a hospital, the ordinance making no difference in degree or kind of hospitals other than to exclude veterinary institutions. A hospital need not be an elaborate and fully equipped modern institution to be a hospital admissible as such by the zoning ordinance in this district; it may be a private hospital of small size, for limited services. Such is the institution in this case, well described by Miss Crain as a "nursing home," the principal service of which is the nursing and care of guests or patients who are ill in mind or body, but not seriously so, the surgical and medical service being minor or secondary, at least in extent and frequency.

Implied Repeal of Zoning Law by Beverage License Laws

PENNSYLVANIA.—*Borough of Kingston* v. *Kalanosky*, Supreme Court, July 1943, reported in 38 Atl. 2d 393.

The defendants Kalanosky are applying for the transfer of a retail beer dispensing business to a general residence district created by a zoning ordinance passed December 3, 1928. Such a transfer was contrary to the zoning ordinance, but permissible under the Beverage License Laws passed May 3, 1933. The defendants claim that the Beverage Law impliedly repealed the Zoning Law.

An implied repeal is one which takes place when a new law contains provisions which are contrary to, but do not expressly repeal those of a former law. Repeal by implication is not favored; and the presumption is that the legislature had no such intention. Applying these principles to the facts in this case the Court says:

"Both acts are comprehensive and enforcible within the scope of the purpose for which they were adopted and are not inconsistent or repugnant. To sustain the position of the court below, destroys the validity of every residential zoning or restrictive business zoning ordinance insofar as it may affect the location of a liquor license. Carried to its logical conclusion, any residential section may have located within its midst a beer or liquor license regardless of its effect upon the community, invading its privacy, affecting its happiness, morals and safety. The location of a liquor license has always been a troublesome and annoying problem and we cannot find, from the reading of the Beverage License Laws, a legislative intent that would permit the establishment of a beer or liquor license in any community regardless of the wishes of its citizens, properly and legally exercised. As we said in Shibe's Appeal, 1936, 117 Pa. Super. 7, 12, 177 A. 234, 237, 'only language which would compel an inescapable conclusion of such construction would sanction such view.'"

Positions Open

The United States Public Health Service announces examinations for appointment as Assistant Sanitary Engineer and Senior Assistant Sanitary Engineer in the regular commissioned corps of the U. S. Public Health Service. The examinations will be given in Washington, New York, Cincinnati, Atlanta, New Orleans, Los Angeles, San Francisco, Seattle, Denver, and Chicago during April and May.

The city of Milwaukee announces examinations on March 29 for two positions in the field of city planning—Planning III (Architectural) and Planner II.

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Conventions—When and Where

Feb. 11-13—College Station, Texas
TEXAS WATER WORKS & SEWERAGE SHORT SCHOOL. Annual Meeting (Texas A & M College). Sec., V. M. Ehler, Austin, Texas.

Feb. 16-17—Cleveland, Ohio
AMERICAN INSTITUTE OF PLANNERS. Annual Meeting. Exec. Sec., Draveaux Bender, Massachusetts Institute of Technology, 77 Massachusetts Ave., Cambridge 39, Mass.

***Feb. 21—New Brunswick, N. J.**
AMERICAN WATER WORKS ASSOCIATION—NEW JERSEY SECTION. Winter Meeting (Hotel Roger Smith). Sec., C. B. Tygert, Box 178, Newark 1, N. J.

Feb. 21-23—Chicago, Ill.
COMMUNITY CHESTS AND COUNCILS, INC. Annual Meeting (Hotel Stevens). Exec. Dir., Ralph H. Blanchard, 155 E. 44th St., New York 17, N. Y.

Feb. 26-28—Grand Rapids, Mich.
CONFERENCE ON HIGHWAY ENGINEERING. Annual Meeting (Hotel Pantlind). Sec., R. L. Morrison, University of Michigan, Ann Arbor, Mich.

Mar. 14-15—Minneapolis, Minn.
AMERICAN WATER WORKS ASSOCIATION—MINNESOTA SECTION. Annual Conference (Hotel Radisson). Sec.-Treas., R. M. Finch, Wallace & Tiernan Co., Inc., 416 Flour Exchange, Minneapolis, Minn.

Mar. 14-16—New York, N. Y.
NATIONAL PUBLIC HOUSING CONFERENCE. Annual Meeting (Hotel New Yorker). Exec. Vice-Pres., Lee F. Johnson, 1015 Fifteenth St., N. W., Washington 5, D. C.

Mar. 20-22—Trenton, N. J.
NEW JERSEY SEWAGE WORKS ASSOCIATION. Annual Meeting (Hotel Stacey-Trent). Sec.-Treas., Edward P. Molitor, Chatham, N. J.

Mar. 28-29—Elmira, N. Y.
AMERICAN WATER WORKS ASSOCIATION—NEW YORK SECTION. Annual Meeting (Hotel Mark Twain). Sec.-Treas., R. K. Blanchard, 50 W. 50th St., New York 20, N. Y.

***Apr. 2-3—Lafayette, Ind.**
AMERICAN WATER WORKS ASSOCIATION—INDIANA SECTION. Annual Meeting (Purdue Memorial Union). Sec.-Treas., Charles H. Bechert, 402 State Library Bldg., Indianapolis, Ind.

Apr. 3-5—Chicago, Ill.
MIDWEST POWER CONFERENCE. Annual Conference (Palmer House). Dir., Stanton E. Winston, Illinois Institute of Technology, Chicago, Ill.

Apr. 3-5—Atlantic City, N. J.
NEW JERSEY MOSQUITO EXTERMINATION ASSOCIATION. Annual Meeting (Hotel Ambassador). Sec., Thomas D. Mulhern, New Brunswick, N. J.

Apr. 8-10—Niagara Falls, Ont., Canada
AMERICAN WATER WORKS ASSOCIATION—CANADIAN SECTION. Annual Convention. Sec., Dr. A. E. Berry, c/o Ontario Dept. of Health, Parliament Bldg., Toronto, Ont., Canada.

***Apr. 11-12—Butte, Mont.**
MONTANA SEWAGE WORKS ASSOCIATION. Annual Meeting (Hotel Finlen). Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 12-13—Butte, Mont.
AMERICAN WATER WORKS ASSOCIATION—MONTANA SECTION. Annual Meeting (Hotel Finlen). Sec.-Treas., Herbert B. Foote, Division of Sanitary Engineering, State Board of Health, Helena, Mont.

Apr. 15-16—Fayetteville, Ark.
ARKANSAS WATER AND SEWERAGE WORKS CONFERENCE. Annual Conference (Engineering Bldg.—University of Arkansas). Sec., Harrison Hale, University of Arkansas, Fayetteville, Ark.

April 22—Chicago, Ill.
AMERICAN FEDERATION OF STATE, COUNTY, AND MUNICIPAL EMPLOYEES. Annual Convention (Hotel Morrison). Gen. Pres., Arnold S. Zander, Federation Bldg., Madison 1, Wis.

Apr. 22-24—Dallas, Texas
AMERICAN PLANNING AND CIVIC ASSOCIATION. Citizens Conference on Planning. Exec. Sec., Miss Harlean James, 901 Union Trust Building, Washington, D. C.

Apr. 29-30—Augusta, Ga.
ASSOCIATION OF COUNTY COMMISSIONERS OF GEORGIA. Annual Meeting (Hotel Bon Air). Exec. Sec., Miss Betty Peeler, P. O. Box 57, Decatur, Ga.

***Apr. 30-May 1—Atlantic City, N. J.**
CHAMBER OF COMMERCE OF THE UNITED STATES. Annual Meeting (Convention Hall). Sec., Ralph Bradford, 1615 H St., N. W., Washington, D. C.

May 6-8—New York, N. Y.
AMERICAN SOCIETY OF PLANNING OFFICIALS. Annual Meeting (Hotel New Yorker). Exec. Dir., Walter H. Blucher, 1313 E. 60th St., Chicago 37, Ill.

May 6-10—St. Louis, Mo.
AMERICAN WATER WORKS ASSOCIATION. Annual Convention. Sec., Harry E. Jordan, 500 Fifth Ave., New York 18, N. Y.

May 8-10—Miami, Fla.
AMERICAN INSTITUTE OF ARCHITECTS. Annual Convention. Exec. Sec., E. C. Kemper, 1741 New York Ave., Washington, D. C.

***May 16-17—Yakima, Wash.**
ASSOCIATION OF WASHINGTON CITIES. Annual Meeting (Hotels Donnelly and Commercial). Acting Sec., Joshua H. Vogel, University of Washington, Seattle, Wash.

May 19-25—Buffalo, N. Y.
NATIONAL CONFERENCE ON SOCIAL WORK. Annual Convention (Memorial Auditorium). Gen. Sec., Howard R. Knight, 82 N. High St., Columbus, Ohio.

June 5-7—Rochester, N. Y.
NEW YORK STATE CONFERENCE OF MAYORS AND OTHER MUNICIPAL OFFICIALS. Annual Meeting (Hotel Seneca). Exec. Sec., William P. Capes, 6 Elk St., Albany, N. Y.

***June 10-13—Richmond, Va.**
MUNICIPAL FINANCE OFFICERS' ASSOCIATION OF THE UNITED STATES AND CANADA. Annual Convention (Hotel John Marshall). Exec. Sec., Carl H. Chatters, 1313 E. 60th St., Chicago.

June 13-14—Lafayette, Ind.
CENTRAL STATES SEWAGE WORKS ASSOCIATION. Annual Meeting (Purdue University). Sec.-Treas., J. C. Mackin, Route 4, Madison, Wis.

***June 13-15—Boston, Mass.**
SPECIAL LIBRARIES ASSOCIATION. Annual Convention (Hotel Statler). Exec. Sec., Mrs. Kathleen B. Stebbins, 31 E. 10th Street, New York 3, N. Y.

June 17-19—Cincinnati, Ohio
NATIONAL ASSOCIATION OF COUNTY OFFICIALS. Annual Meeting (Hotel Netherlands-Plaza). Sec.-Treas., George F. Simmons, Ogden, Utah.

***June 24-27—Vancouver, British Columbia**
CANADIAN FEDERATION OF MAYORS AND MUNICIPALITIES. Annual Conference Hotel Vancouver). Sec., Miss Jessica Allan, Mount Royal Hotel, Montreal, Quebec, Canada.

***June 26-28—Saskatoon, Sask., Canada**
SASKATCHAWAN URBAN MUNICIPALITIES ASSOCIATION. Annual Convention (Hotel Bessborough). Sec.-Treas., S. N. MacEachern, Bessborough Hotel, Saskatoon, Sask., Canada.

***July 22-24—Pittsburgh, Pa.**
PENNSYLVANIA CHIEFS OF POLICE ASSOCIATION. Annual Meeting (Hotel William Penn). Sec., F. B. Titus, Lansdowne, Pa.

***Aug. 19-21—Chicago, Ill.**
NATIONAL INSTITUTE OF GOVERNMENTAL PURCHASING, INC. Annual Conference and Products Exhibit (Hotel Stevens). Exec. Dir., Albert H. Hall, 730 Jackson Pl., N. W., Washington 6, D. C.

***September 16-20—Poland Spring, Me.**
NEW ENGLAND WATER WORKS ASSOCIATION. Annual Convention. Pres., H. W. Griswold, 613 Statler Bldge., Boston.

* First appearance on this page.

Recent Labor Union Decisions

(Continued from page 141)

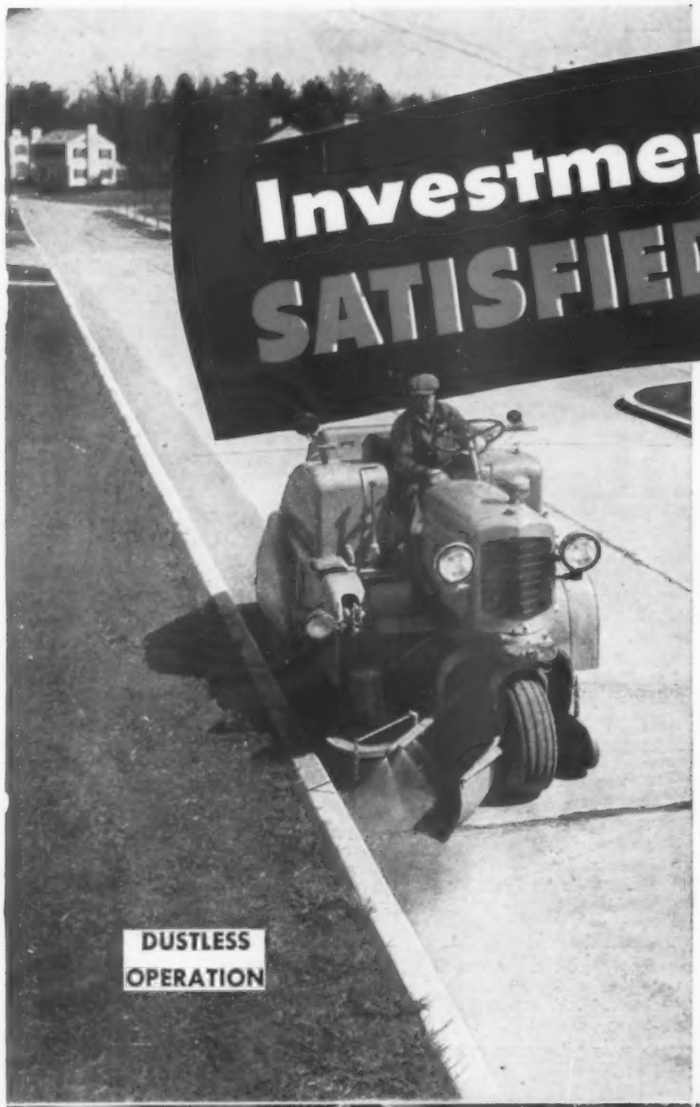
other than public funds." It had been contended that the Ohio law authorizes wage assignments and that this check-off is such an assignment, but the Court held that the city, under the applicable law, could agree or disagree to such an assignment, as the language is not mandatory. The Court stated: "It follows that the right granted to municipalities to agree or disagree was not a grant of power, express or implied, to municipalities to check-off union dues at its own expense."

The Court further stated: "We are in agreement with the legal principles cited by the city relating to public purpose, but we are of the opinion that the services rendered by plaintiff's employees and the supplies and equipment used for the deduction and transmission of union dues were clearly for private convenience and benefit of such employees and the Dayton Public Service Union and not for a public, municipal purpose." *Hagerman* v. *City of Dayton et al.*

It is expected that these decisions will be appealed.

Another case of interest was decided on May 9, 1945, by the Circuit Court for the County of Wayne, Michigan, in Chancery, holding that a Police Commissioner's order prohibiting members of the Police Department from joining a Fraternal Order of Police, and subsequent dismissal of two members who violated the order, was reasonable and the Commissioner had the authority to make the order. *State Lodge of Michigan Fraternal Order of Police* v. *City of Detroit.*

A recent bulletin issued by the International Association of Chiefs of Police, entitled "Police Union and Other Police Organizations," considers quite thoroughly the questions of police unions, and the right of police officers to organize or join such unions and concludes that the majority opinion appears to be that police unions, affiliated with trade-labor organizations are (1) contrary to the basic nature of police duties, (2) powerless to engage in collective bargaining or benefit from the closed shop, check-off system, or strike privileges, and (3) state and municipal governments are vested with constitutional authority to adopt a policy prohibiting public employees from affiliating with such organizations.



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Municipal and Civic Publications

Building for the People

REBUILDING OUR COMMUNITIES.—*By Walter Gropius. Paul Theobald, 4 North Wabash Ave., Chicago 2, Ill.* 1945. *Illus.* 61 *pp.* $1.75

A lecture delivered under the joint auspices of the Chicago Institute of Design and the Chicago Plan Commission by the chairman of the Department of Architecture, Harvard University, and world-famous founder of the Bauhaus.

If post-war building is to bring about better housing and healthier communities, the human element must become the dominant factor in any building program, says Walter Gropius. Human needs must be put above economic or industrial requirements.

The underlying theme of what Gropius envisages is the *organic* community which will afford every citizen a chance to participate in the general social life of his environment. This means, in other words, self-contained neighborhoods, "small enough to serve as organisms for reactivating normal social intercourse." This theme is further expounded in illustrations and a theoretical analysis of the functional approach to community planning and architecture.

The book, first in a series of monographs published under the editorship of L. Moholy-Nagy of the Chicago School of Design, presents answers to some of the most important questions facing American communities today.

Is Planning for Prosperity Possible?

FREEDOM UNDER PLANNING.—*By Barbara Wootton, The University of North Carolina Press, Chapel Hill, N. C.* 1945. 180 *pp.* $2.

This book has been hailed in the headlines as a timely and well-aimed answer to Hayek's *Road to Serfdom* and men like Charles Beard have proclaimed it "must" reading. It presents a clear and unemotional approach to the problem of planning for post-war prosperity within the framework of our democratic society.

Miss Wootton who has had first-hand experience in living in England under a completely planned war-time economy, testifies that planning need not involve going to either extreme. She does state with conviction, however, that the absence of planning is the quickest vehicle down the road to serfdom and outlines a middle-of-the-road course under which freedom and planning can be preserved together.

Comparing Forms of City Government

FORMS OF CITY GOVERNMENT.—*Bureau of Municipal Research, University of Texas, Austin, Texas.* 1945. 34 *pp.* 50c.

This pamphlet provides a short discussion of the various types of city government in use in Texas. Diagrams and organization charts are included, as is a list of selected standard references on American city government.

Vital Statistics—Past, Present, Future

POPULATION TRENDS IN SOUTHWESTERN PENNSYLVANIA 1910-1944.—*Prepared for the Allegheny Conference on Community Development by Bureau of Social Research, Federation of Social Agencies, 519 Smithfield St., Pittsburgh 22, Pa.* 1945. *Mimeo.* 33 *pp.* 50c.

Study of vital statistics for Pennsylvania's counties; data are grouped according to racial composition, nationality groupings, age and sex characteristics, and urban and rural areas.

On the basis of available material, the authors have attempted to project existing statistics into the future so as to be able to predict population trends until 1960. Charts and maps on the present and estimated future population according to various criteria are included.

Trends in Living Memorials

COMMEMORATION THROUGH COMMUNITY SERVICES.—*By Anne Holliday Webb. The American City Magazine Corp. Illus.* 36 *pp.* $1. *Special price in quantities.*

An illustrated brochure which surveys different types of war memorials and community service activities for carrying on the vision and courage of those commemorated. An important section is devoted to the organization of local citizens' councils and war memorial committees.

The Process of Integration

THE REFUGEES ARE NOW AMERICANS.—*By Maurice R. Davie and Samuel Koenig, Public Affairs Committee, Inc.* 1945. 32 *pp.* 10c.

This report by Maurice R. Davie of Yale University and Samuel Koenig of Brooklyn College is based on a nation-wide study conducted by the Committee for the Study of Recent Immigration from Europe. The findings clearly show that the overwhelming majority of refugees—in spite of greater adjustment problems than are faced by ordinary immigrants in ordinary times—have become well-integrated into American communities and are self-supporting. Most of them have been granted citizenship.

"Reports from communities throughout the country reveal that refugees take part in all kinds of community activities. The striking extent to which refugees have fitted into American community life may be explained partly by their relatively small numbers and wide distribution, partly by their superior educational and cultural background, but particularly by their desire to become assimilated."

Grass Root Democracy

YOUR SCHOOL AND ITS GOVERNMENT.—*By Earl C. Kelley and Roland C. Faunce, National Self Government Committee, Inc., 80 Broadway, New York 5, New York.* 1945. 27 *pp.*

Drs. Kelley and Faunce, prominent Michigan educators, warn that anti-democratic forms of government and future wars may result unless the basic principles of democratic living are taught right in the class rooms. The authors insist that autocratic class rooms do not turn out citizens fit to live in a democratic country. Self-government in the schools is the cornerstone of our national system of self-government, this pamphlet points out, and taxpayers are not getting their money's worth from schools which do not teach democratic principles by letting the students practice them.

Housing Bookshelf

BIBLIOGRAPHY OF PUBLIC HOUSING AND RELATED SUBJECTS FOR THE USE OF TEACHERS AND STUDENTS.—*Compiled by Elizabeth L. Carey, National Housing Agency, Washington, D. C.* 1945. 11 *pp.*

The references listed in this bibliography pertain mostly to literature in the field of public housing from 1938 through November 1945. They are grouped under five main classifications: General readings, government publications, housing study guides, periodicals, bulletins issued by housing associations. Within these groupings, references are listed according to author or agency.

New Building Code

CITY OF TOLEDO, OHIO, BUILDING CODE.—*Issued as a part of and supplement to* The Toledo City Journal, *January 5,* 1946. 109 *pp.* $2.

An ordinance providing for fire limits and regulations governing the construction, alteration, equipment, repair, or removal of buildings and structures, and declaring an emergency. Ordinance No. 327-45 was enacted by the Council of the City of Toledo, Ohio, on December 26, 1945.

Survey of Traffic Facts and Figures

OFFICIAL TRAFFIC ORGANIZATIONS IN CITIES AND STATES.—*Eno Foundation for Highway Traffice Control, Inc., Saugatuck, Conn.* 1945. *Mimeo.* 98 *pp.*

A survey of police and engineering organizations made by the Eno Foundation for the convenience of those who have in the past requested information regarding existing traffic organizations. Information was obtained on the location and size of traffic organizations, salaries of traffic heads, the distribution of responsibilities for the most common traffic functions, titles applied to traffic organizations, and other pertinent factors regarding traffic bureaus in police departments and engineering departments.

Serving the Veterans

VETERANS' INFORMATION CENTERS.—*By John K. Gurwell, Public Administration Service, 1313 East 60th St., Chicago 37, Ill.* 1945. 49 *pp.* $1.50.

This survey presents data on veterans' information centers throughout the country, especially concerning those operated by municipalities wholly or in conjunction with public or private agencies. It is based on answers to a questionnaire sent to cities of over 25,000 population by the International City Managers' Association. This booklet should prove helpful to returning veterans as well as to municipal officials planning to set up some sort of service agency to deal with veterans' problems.

Food Center

AGRICULTURE: GREATER KANSAS CITY.—*City Plan Commission, Kansas City, Mo.* 1945. 53 *pp.*

A report drawing attention to the importance of the agricultural hinterland to the economic life of Kansas City. This study analyzes the origin, use, and destination of agricultural products produced in the region of Greater Kansas City and indicates future routes of trade with neighboring states and foreign countries, particularly Latin American markets.

Taking into account also the processability of by-products and raw materials, possible future industrial developments are pointed to. Improvements for Kansas City are mapped out to coincide with what the planners believe to be its future role in the agricultural industry.

Race Relations Handbook

DIRECTORY OF AGENCIES IN RACE RELATIONS.—*Julius Rosenwald Fund, 4901 Ellis Ave., Chicago 15, Ill.* 1945. 124 *pp.* $1.

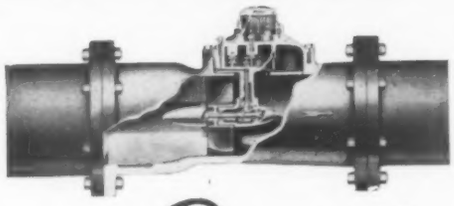
An important handbook which lists national, state, and local organizations active in the race relations field. Included are short histories of the groups and agencies, their addresses, personnel, publications, and general description of activities. It does not include governmental agencies or local branches of national organizations. This study should prove useful for officials who want to contact these organizations for the purpose of getting information and literature, and to coordinate race relations programs.

"Know How" of Public Relations

PUBLIC RELATIONS FOR THE ORGANIZATION EXECUTIVE.—*By Frank Fogarty. National Association of Commercial Organization Secretaries, Inc., 1615 H St. N.W., Washington 6, D. C. Illus.* 16 *pp.*

The "know how" of public relations, presented in easy-to-grasp fashion by an expert in the field. By means of cartoons the main approaches to the subject (and the object) are outlined—covering not only the different media of communications via which public relations are waged, but also the ways in which people can be interested or stimulated by the skillful use of public-relations techniques.

DIRECT READING



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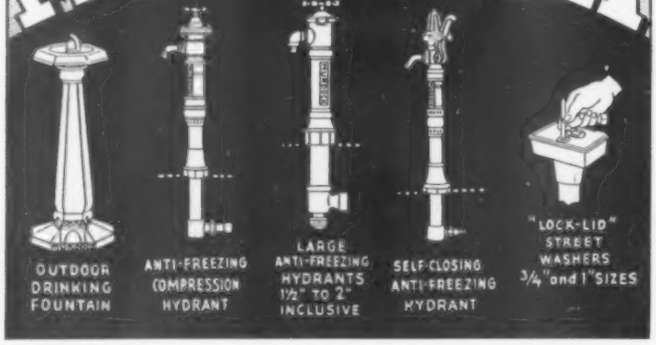
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Time to Rebuild

NEW CITIES FOR OLD.—*By Louis Justement. McGraw-Hill Book Company, Inc., New York City, N. Y.* 1946. *Illus.* 227 *pp.* $4.50.

An energetic study of one of today's most pressing problems, that of "city building." The economic, social, political, financial, and administrative problems which must be solved are analyzed with the hope that the reader will see the importance of a broad program which will integrate all of these factors and coordinate urban redevelopment with the national economy. The author decries piecemeal planning and proposes a program which takes an over-all view of "city building in terms of space, time, and money." Mr. Justement points out that mere redevelopment of blighted areas will not stop urban decay in our cities, and takes as his theme a challenge to planners that, "the time has come to rebuild our cities."

Planning Classic Translated

THE ART OF BUILDING CITIES.—*By Camillo Sitte, translated by Lt. Charles T. Stewart, U.S.N.R. Reinhold Publishing Corporation, New York, N. Y.* 1945. *Illus.* 121 *pp.* $5.50.

First English translation of Camillo Sitte's classic on city planning which was published in Vienna in 1889. Mr. Sitte's book has been translated into French and Spanish and is widely read and acclaimed throughout Europe.

The book is, as its original declared, a study of city building "according to its artistic fundamentals" and as such launches a forceful attack against the monotonous building lines, rigid gridiron, and lack of open space which characterize the large city of today as well as the crowded cities of 1890. The translation is especially timely today when architects and city planners are concerned with rebuilding wartorn cities or clearing slum areas of those which escaped the disaster. They will find Sitte's work a thoroughly modern approach to the problem of developing a "living" city.

The Voice of the People

PLANNING FOR JOBS.—*Proposals Submitted in the Pabst Post-War Employment Awards. Edited by Lyle Fitch and Horace Taylor. The Blaskiston Company, Philadelphia, Pa.* 463 *pp.* $3.75.

The editors have examined and arranged by subjects some two hundred of the more than 35,000 essays that were submitted in a recent contest sponsored by the Pabst Brewing Company on the problem of post-war employment. They have, in their system of classification, tried to bring out significant relationships and differences in the various types of ideas the contestants advanced. The suggestions for dealing with unemployment that have been included were selected, for the most part, because they are "ingenious and interesting, or because they represent typical points of view, or because they illuminate various aspects of the employment problem." As many points of view as possible have been included, especially on controversial questions.

Of particular interest to public officials is Chapter 2, "What America Thinks About the Job Problem," which is an analysis of a random sample of 4,100 of the essays and of a large part of the 1,500 essays rated in the contest as "superior." This study disclosed that public works were regarded by the contestants as by far the most important weapon against unemployment. The confusion in thinking about the role of government revealed in many of the essays is food for thought.

Conference Agenda

VICTORY CONFERENCE ON MUNICIPAL PROBLEMS. *The American Municipal Asosciation, 1313 East 60th St., Chicago 37, Ill. Dec.* 1945. 110 *pp.* $2.

Proceedings of the twenty-second annual conference of the American Municipal Association, held in Chicago last November. Includes all the important addresses and reports presented by Maj. Gen. Philip B. Fleming, Harold D. Smith, John B. Blandford, Stuart Chase, and many others.

Water Purification

HANDBOOK OF INDUSTRIAL WATER CONDITIONING. —*By W. H. & L. D. Betz, Gillingham and Worth Sts., Philadelphia 24, Pa.* 1945. *Illus.* 171 *pp.*. $1.

Up-to-date text for reference covering industrial water conditioning in all its phases. The authors, chemical engineers and consultants on water problems, have included definitions and diagrams for the convenience of the lay reader. Two-color plates illustrate the important steps of water treatment for industrial use, as well as purification and plant control.

Other Reports Received

CHICAGO, ILL.—A Report on the Regulatory Inspectional Services of the City of Chicago and a Plan to Simplify Procedures. Prepared by the Staff of the City of Chicago Budget Survey Committee. 1945. 135 pp.

HARTFORD, CONN.—Sixth Annual Report of the Housing Authority. Illus. 31 pp.

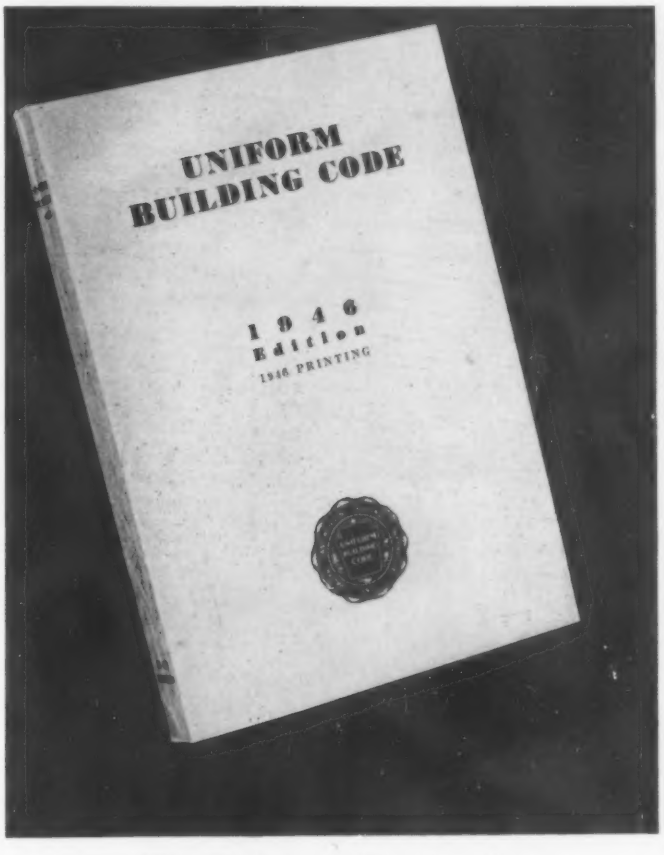
KENTUCKY—*The Kentucky State Budget System.*—By James W. Martin and Vera Briscoe. University of Kentucky Press, Lexington, Ky. 1945. 103 pp. 50c.

MIAMI, FLA.—*Miami Today and Tomorrow.* Miami City Planning Board, 1945. Illus. 33 pp.

PALO ALTO, CALIF.—Annual Report for the Fiscal Year 1944-1945. 128 pp.

PITTSBURGH, PA.—Basic Data on Income and Expenditures for Public Works Improvements 1920-1945 as Related to a Six-Year Program of Public Works Maintenance 1948-1951. Department of City Planning, Pittsburgh, Pa. 1945. Mimeo. 58 pp.

VANCOUVER, WASH.—*Negroes at Vancouver, Washington.* A Publication of the Housing Authority of the City of Vancouver. 1945. 9 pp.



Building Code for Safe, Modern Construction

Obsolete building codes are impeding construction of vital housing in many American cities today.

Completely revised through three years of continuous work, the Uniform Building Code, 1946 Edition, meets the need for an up-to-the-minute ordinance to insure safe standards of building construction.

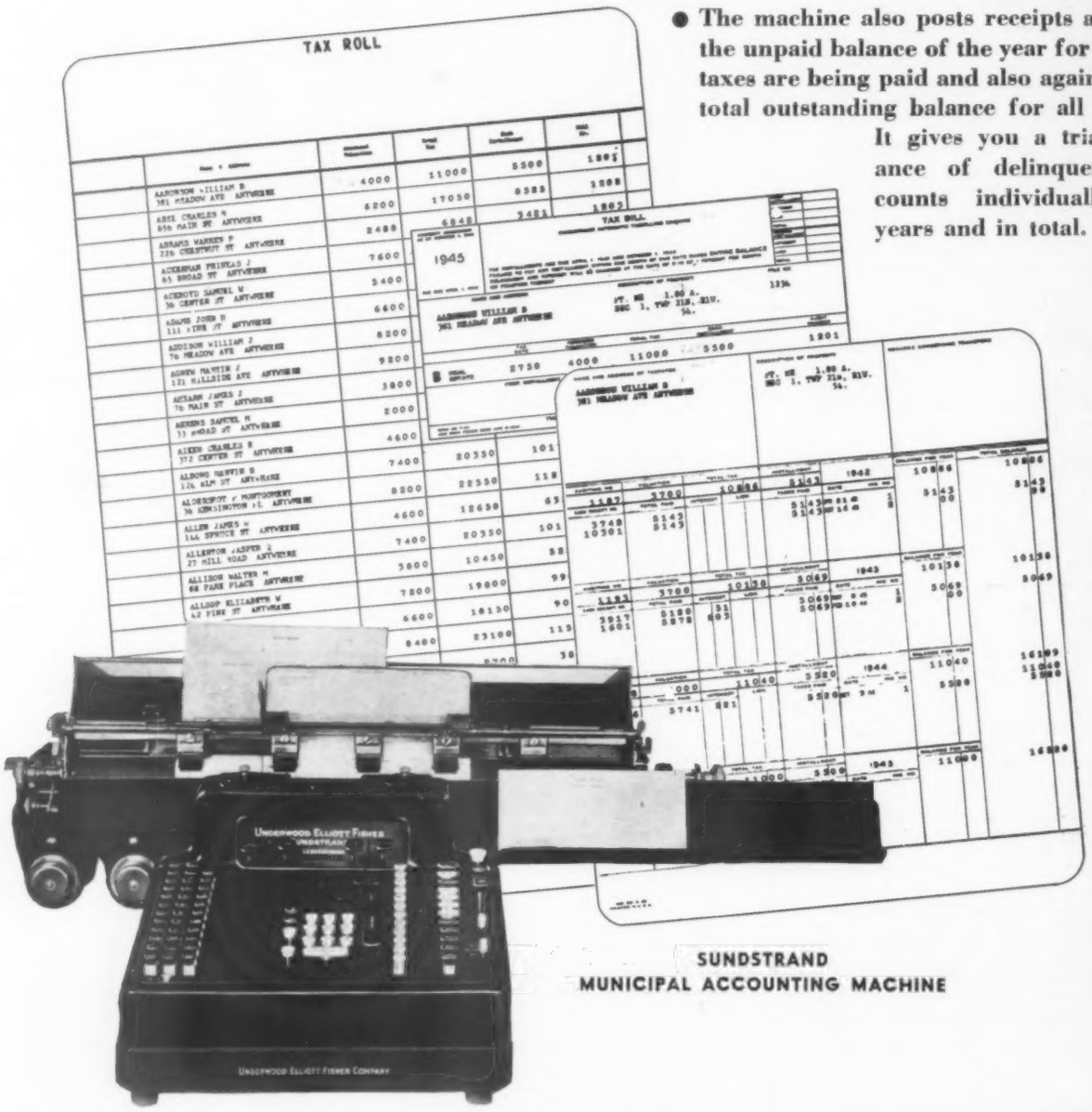
Price, $2.50 per copy; 332 pages; indexed. For copies of the Code and information on methods of adoption and maintenance, write:

UNIFORM BUILDING CODE ASSOCIATION

124 West Fourth Street — Los Angeles 13, Calif.

SUNDSTRAND
Municipal Accounting Machine

- **Prepares tax roll and tax bill and posts to taxpayer's ledger card all in one operation. These unit cards, a by-product of the billing operation, actually may serve the purpose of a tax roll.**
- **A Card Assessment Roll can be prepared just as simply and will save 80% of your copying each year.**
- **The machine also posts receipts against the unpaid balance of the year for which taxes are being paid and also against the total outstanding balance for all years. It gives you a trial balance of delinquent accounts individually by years and in total.**



SUNDSTRAND
MUNICIPAL ACCOUNTING MACHINE

UNDERWOOD CORPORATION

Manufacturer of the Famous Sundstrand Municipal Accounting Machine

One Park Avenue **New York 16, N. Y.**

News and Illustrations

Items of Interest to City, Town and County Officials and Others Concerned with the Economical Construction and Efficient Operation of Public Improvement Undertakings

The Moto-Paver, Hetherington & Berner's new travel plant, is a completely self-contained mix machine mounted on pneumatic tires and driven by two gasoline engines

New Travel Plant for Mixing Bituminous Material

Hetherington & Berner, Inc., 731 Kentucky Ave., Indianapolis, Ind., builders of asphalt-mixing equipment, announce the Moto-planer, a new travel plant embodying many improvements. The new plant is a completely self-contained mix machine mounted on pneumatic tires and driven by two gasoline engines. One engine is for driving the mixer and related units, the other for moving the machine along the road at any desired paving speed without varying the mixer speed.

Capacity of the plant is 100 to 120 tons per hour of any medium type bituminous mix. Paving speed can be regulated as desired between 4 to 5 feet per minute. By shifting gears in one transmission the machine will travel under its own power 15 to 18 miles per hour, so that no trailer is necessary to haul it from one job to another.

The plant is also equipped with a novel spreading and laying device consisting of a patented spreading mechanism and a strike-off bar provided with leveling skids. This eliminates the necessity for a separate paving machine and makes it possible to use the machine for making various widths or roads as required, also to accommodate almost any crown or thickness desired.

Two 500-gallon bitumen tanks are mounted on the plant. The mixer and asphalt pump are jacketed, and provision is made for the heating of both of these units, as well as the bitumen tanks. A special feeder provides accurate adjustment of aggregate flow into the mixer, and the asphalt pump is driven through an infinitely variable reducer which enables the operator to keep close control over the amount of binder introduced into the mix.

The Moto-paver may be used either as a traveling plant, with the aggregate dumped directly from trucks into the plant on the road, or a special loader unit can pick up windrowed material off the road.

Bulletin MP-46 is available giving complete details and specifications.

Bob McKenrick Appointed by Blaw-Knox to New Post

R. P. (Bob) McKenrick has been appointed manager of construction equipment of the Blaw-Knox Division of the Blaw - Knox Co., Pittsburgh, Pa. For ten years he has been in charge of construction equipment sales in the midwestern states comprising the Chicago territory.

Robert P. McKenrick

Mr. McKenrick has spent seven years with the Pennsylvania Highway Department. During the war he was project manager in charge of construction of the synthetic rubber plant built by the Blaw-Knox Co., for the B. F. Goodrich Co., Louisville, Ky.

Here is the way Buffalo, N. Y., one of the toughest snow spots in the country, uses modern snow fighting techniques for complete snow removal. (1) The men load their trucks with rock salt at the first sign of a storm. (2) Spread on the streets, it melts the snow quickly before it has a chance to cake and freeze. (3) Result—a bare street, safety and more convenience

WHEREVER YOU GO, YOU SEE BURROUGHS MACHINES

• Illustrated is a small part of the bookkeeping department of The First National Bank of Boston. The extensive use of Burroughs machines is typical, not only of banks, but of offices in all lines of business throughout the nation.

1st Burroughs

IN MACHINES
IN COUNSEL
IN SERVICE

Developing more efficient mechanized routines . . . providing more accounting information for management . . . saving time and reducing costs—these are matters on which Burroughs systems and installation men specialize in serving all lines of business. Working daily on the business machine problems of hundreds of organizations, they have the wide experience which—with the pooled experience and knowledge of many Burroughs specialists—enables them to analyze problems, develop efficient procedures . . . and follow-through to insure maximum benefits. This superior counsel is another reason why you see Burroughs machines wherever you go.

BURROUGHS ADDING MACHINE COMPANY • DETROIT 32, MICHIGAN

FIGURING, ACCOUNTING AND STATISTICAL MACHINES • NATIONWIDE MAINTENANCE SERVICE • BUSINESS MACHINE SUPPLIES

Blade clearance on this new Reo Trimalawn is adjusted by convenient knob

Two New Lawn Mowers by Reo Motors, Inc.

Two new lawn mowers, post-war products of former war facilities of one of the pioneer auto companies of Michigan, have been announced by the new Lawn Mower Division of Reo Motors, Inc., at Lansing, Mich. One is a 17-inch hand mower, called the Michigan Noiseless, and the other is a 21-inch powered model, called the Trimalawn Power Mower.

Both have convenient hand adjustment knobs that provide flexible control for any grass-cutting job. One connects with an automatic levelling device and controls the exact height of the cut. The other, hand controlled, gives micrometer-fine adjustment to .001 inch, of exactly the proper clearance between the cutting blades and the bottom knife. This precise control permits efficient cutting clearance without clattering the blades against the knife, insuring unusual quiet in the Michigan Noiseless which also uses a quiet roller chain drive.

On the Trimalawn Power Mower, cutting blades extend three inches beyond the driving wheels on each side, making this model particularly useful for trimming around flower beds, trees, traps on golf courses, and other obstructions in lawns.

Daunt Corp. Elects Officers

At the annual meeting of the Board of Directors in January, The Daunt Corp., 120-126 Sutton St., Brooklyn 22, N. Y., manufacturers of lighting standards, tubular poles, luminaires, and metal antennae, elected the following officers for the year 1946:

Alfred G. Strutt, re-elected president; Joseph J. Daunt, formerly secretary, now vice-president; Alfred E. Amsler, secretary and treasurer.

All of these officers also serve on the Board of Directors.

Merckel of W&T Honored on 25th Anniversary by Diamond Club

Frederick G. Merckel, executive assistant to Wallace & Tiernan Industries, Newark 1, N. J., was honored by his associates at a dinner sponsored by the W&T Diamond Club recently at the Montclair Golf Club, Montclair, N. J., on completion of 25 years with the organization. The W&T Diamond Club is made up of employees having ten years or more service with the company.

F. G. Merckel

Mr. Merckel joined Wallace & Tiernan in 1921 and one of his early assignments took him to the Orient to supervise the installation of a filtration plant in Shanghai, China. He subsequently went to Kansas City as district manager, and later Chicago as division manager, and came to Newark upon his appointment to the executive group. Before joining the organization he had been connected with the New York Continental Jewell Filtration Co., and the Permutit Co.

He is a member of the American Society of Civil Enginers, the American Public Health Association and the American Water Works Association; and of Tau Beta Pi.

Welsbach Official Dies in Indiana

James M. Brodbeck, manager of the Chicago Division of the Welsbach Street Lighting Company of America, Philadelphia, Pa., died recently in Hammond, Ind., at the age of 61.

Mr. Brodbeck joined the Welsbach Group in 1935 as supervisor of safety in the New York office. He became district manager in 1940 and was transferred as division manager to Chicago in 1944. Before joining this organization he was manager of industrial relations of Northern Indiana Public Service Co.

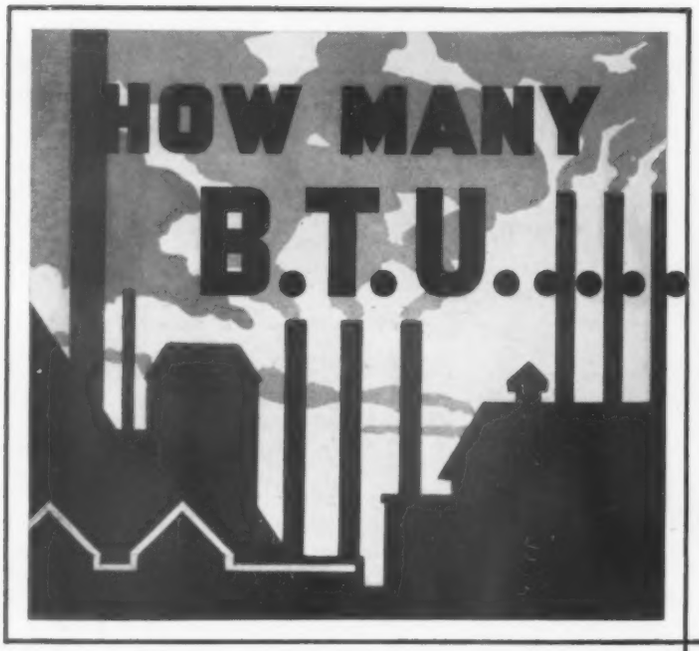
Lint Interceptor for Pumps and Swimming Pool Installations

For use in connection with pumps and in water works and swimming pool installations where lint and wiping waste gets into drainage lines and clogs them, J. A. Zurn Mfg. Co., Erie, Pa., has introduced a new cast iron line interceptor.

A perforated strainer of plain or galvanized metal to which may be attached a brass or copper basket of suitable mesh does the intercepting. The basket is easily removed, inspected, and cleaned. The basket has an open bottom and all dirt and sediment can be brought out through the bottom blow-off connection.

The unit is built for working pressures up to 150 pounds. It cannot become airbound because the openings through the basket are on a line with the top of the pipe.

Zurn's new lint interceptor for installations where lint and wiping waste get into drainage lines and clog them



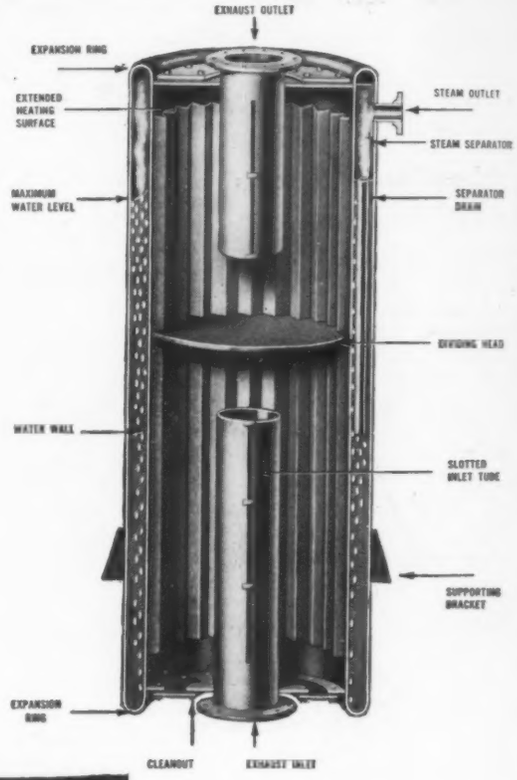
go up the flue?

YOU CAN SAVE THIS HEAT WITH MAXIM HEAT RECOVERY SILENCERS . . .

In any operation where Diesel power is used, an important amount of usable heat goes out the exhaust pipe and is totally wasted. This heat, transformed into steam or hot water, could in most cases be used to good advantage . . . without a cent of added fuel cost.

Maxim Heat Recovery Silencers make this possible. They are efficient silencers and, where necessary, spark arrestors. But, in addition, they provide for the recovery of waste exhaust heat to produce steam or hot water for heating or processing operations. Automatic controls are available to control steaming rate, and these silencers may, due to their special construction, be run dry without harm to the unit.

Maxim Silencers without the heat recovery feature are available for effective silencing of internal combustion engine exhaust or intake, steam engine exhaust, air compressor intake, vacuum pump discharge, blower intake and discharge. Engine exhaust silencers available with or without spark arrestor.



Heat Recovery Silencer Bulletins WH-100, WH-102 and WH-103 will be sent promptly on request.

THE MAXIM SILENCER COMPANY • 66 HOMESTEAD AVE., HARTFORD 1, CONN.

ARMY E NAVY

MAXIM

Mack Elects Vice-President

W. M. Walworth has been elected by the Board of Directors of the Mack Mfg. Corp., Empire State Bldg., New York 1, N. Y., as Vice-President and Chief Engineer, according to C. T. Ruhf, President.

W. M. Walworth

Mr. Walworth has been acting chief engineer since March 1945. A graduate of of the Massachusetts Institute of Technology, he joined Mack in 1939 after twelve years in the engineering department of Reo Motors, Inc., Lansing, Mich. His first assignment at Mack was in the Allentown, Pa., plant; then he moved to New Brunswick, N. J., where he remained as executive engineer until he was appointed acting chief engineer.

His headquarters will continue to be in the Empire State Building.

Lt. Hart Returns to Neptune Meter

First Lieutenant John C. Hart has returned as sales engineer of the Neptune Meter Co., 50 West 50th St., New York 20, N. Y., with his headquarters at the Kansas City office, according to a recent announcement.

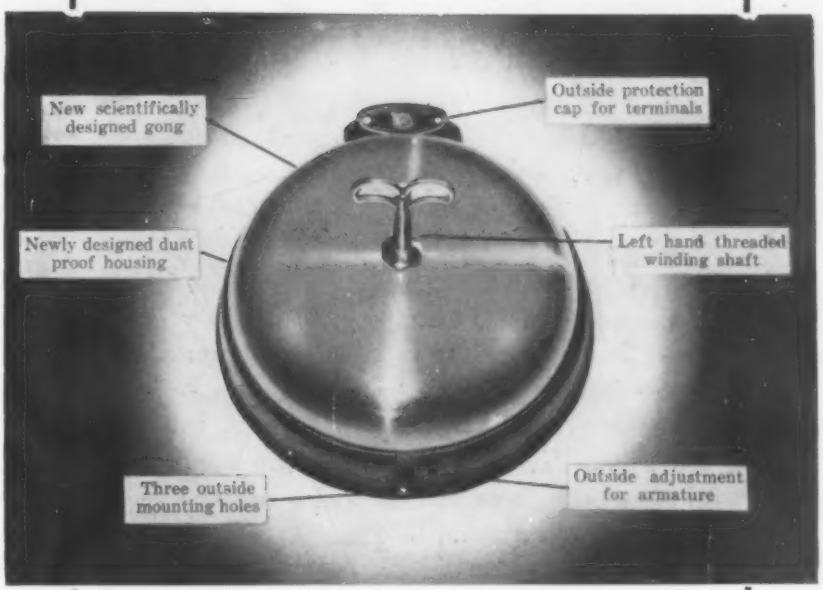
John C. Hart

He served for three years in the armed forces and completed 27 missions as a B-17 navigator with the 8th Air Force. He worked for Neptune for three years before entering the Army in 1942.

Luria Engineering Corp. Moves to New Quarters: A Correction

In announcing the activities of the Luria Engineering Corp., engineers and constructors in the aviation and industrial fields, in the January issue of THE AMERICAN CITY, the new New York offices of the company were designated as 350 Fifth Ave., New York, N. Y. The address should have read 500 Fifth Ave., New York 18, N. Y. Associated with Mr. Herbert B. Luria, President, are B. H. Tripp, Executive Vice-President; P. A. Stroble, Vice-President and Director of Engineering; and R. L. Hedlander, Sales Manager.

ELECTRO-MECHANICAL GONG


New scientifically designed gong
Outside protection cap for terminals
Newly designed dust proof housing
Left hand threaded winding shaft
Three outside mounting holes
Outside adjustment for armature

MODEL 66 GONG

In presenting the 10" ELECTRO-MECHANICAL GONG, MODEL 66 is backed by 20 years' experience in the fire alarm field. Model 66 has been designed and tested over a long period of time to give years of dependable, trouble free service. The newly designed gong gives better tone and penetration. The cast anodized aluminum alloy dustproof housing assures you of long mechanical operation. The three outside mounting holes make ease of installation, and by removing the terminal cap, terminals are exposed for quick connection. The exterior armature adjuster eliminates the old method of disassembling the bell to make adjustments. All movable parts are journaled in self-lubricating bearings. The MODEL 66 GONG is the best audible fire alarm signal available. Interchangeability of parts, high insulation, with large mainspring capacity, lend it further prestige.

Inquiries will be promptly answered, your problems will be ours.

MANUFACTURED BY

SOUTHERN SWITCH & SIGNAL CO.

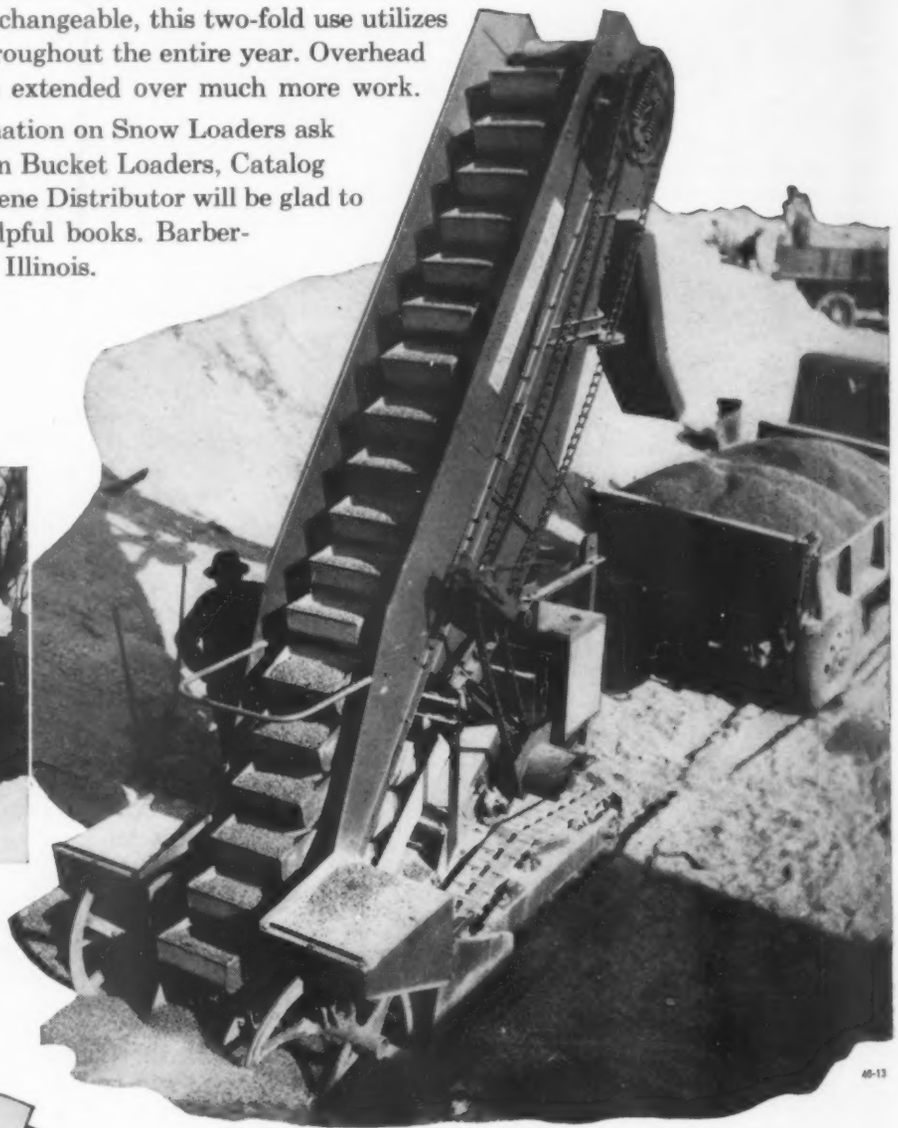
SHREVEPORT, LOUISIANA

What a B-G *Snow Loader* Does in Summer

• Unlike many other types of snow handling equipment, the Barber-Greene Snow Loader can be used throughout the year. When all danger of snow is past in the spring, many municipalities and contractors turn their Snow Loaders into Bucket Loaders by substituting a standard Bucket Loader boom on the Snow Loader chassis.

Completely interchangeable, this two-fold use utilizes the same chassis throughout the entire year. Overhead and depreciation are extended over much more work.

For complete information on Snow Loaders ask for Catalog No. 538—on Bucket Loaders, Catalog No. 82. Your Barber-Greene Distributor will be glad to supply you with these helpful books. Barber-Greene Company, Aurora, Illinois.

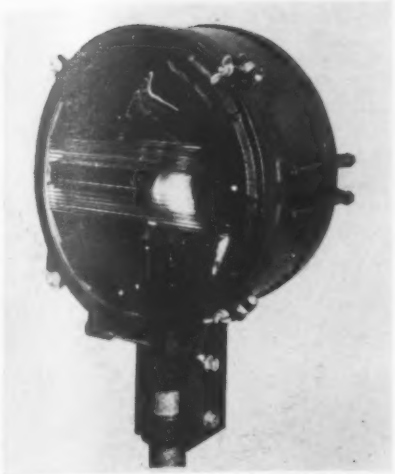


In the urgent job of relieving congested downtown streets, the B-G Snow Loader, with capacities of 7 to 20 cubic yards per minute—depending on model—pays for itself in truck savings time alone.

48-13

B-G Barber-Greene CONSTANT FLOW EQUIPMENT

LOADERS • PERMANENT CONVEYORS • DITCHERS • PORTABLE CONVEYORS • FINISHERS • BITUMINOUS PLANTS • COAL MACHINES



This is the new searchlight type of approach light Westinghouse has introduced for use at municipal airports with radio "blind landing" systems

Approach Light for Blind Landing Systems

Municipal airport officials will be interested in a new searchlight-type approach light for use with radio blind landing systems, announced by the Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

The new light uses a nineteen-inch reflector-lens system with a special 250-watt lamp. The main beam has over one and one-quarter million candlepower and is aimed directly along the path of the incoming plane. Auxiliary "fan beams" of over one-hundred thousand candlepower reach from the ground to an angle far above any plane on the radio beam.

These lights, mounted in long rows on each side of the approach zone, and spaced five-hundred feet apart, set up brilliant walls of light on each side of the approaching plane. As each light has about the same candlepower as an airway beacon, the 2500-foot rows of light provide over a half-mile of direct visibility even under unfavorable weather conditions.

New DDT Concentrate Easy to Use

Municipalities will be interested in a new DDT concentrate, known as Pestroy, designed to provide an economical, safe, and easy-to-use insecticide with high residual value. The Sherwin-Williams Co., Cleveland, Ohio, has announced this for immediate distribution.

Pestroy, a 25 percent DDT concentrate, is diluted with water to make a repellent and insecticide which can be sprayed or brushed on any type of surface. A one-gallon can of Pestroy, diluted with four gallons of water to make a 5 percent solution of insecticide, will effectively cover 4,800 square feet of surface. On interior surfaces, the residual deposit left by Pestroy will remain effective for from two to three months. A 5 percent solution of Pestroy will protect outside surfaces such as screens and doorways for from two to three weeks under average weather conditions.

Pestroy is odorless and stainless and, when properly diluted with water, is fireproof. Continual freezing and thawing has no effect upon its efficiency; it can be safely handled without special protection and can do no damage to fabrics, wood, paint, wiring, metals, or other materials.

This product provides an answer to the problem of ridding outdoor areas of mosquitoes. Parks and other open areas can be protected effectively from mosquitoes for several days with a solution of ½ pint of Pestroy and 10 gallons of water sprayed liberally on shrubs, bushes, low-hanging tree limbs, grass and other surfaces harboring mosquitoes. No special equipment is required to apply Pestroy. An ordinary low-pressure coarse spray garden sprayer or simple paint brush are effective applicators.

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The Ear That Locates Underground Leaks

GLOBE GEOPHONE

Locates leaks in water, air, and steam pipes quickly nad accurately.

Many times the Geophone on one leak alone saves more than the cost of the instrument. Successfully used for 25 years by many Water Systems, Industrial Plants, and U. S. Government Plants.

No water system, industrial plant, institution having underground piping, water, air, or steam, can afford to be without a Globe Geophone in their Maintenance Department. One Water Service Company has over 30 Globe Geophones in use in their various systems. The Globe Geophone is a time and money saver. It conserves water and steam.

Price Complete with Leather Covered Carrying Case and Shoulder Strap... **$75.00**

SEND FOR FOLDER AND MORE DATA

GLOBE PHONE MFG. CORP.
Department H, Reading, Mass.

GENUINE CAST BRONZE

TABLETS
HONOR ROLLS
· PLAQUES ·
MEMORIALS

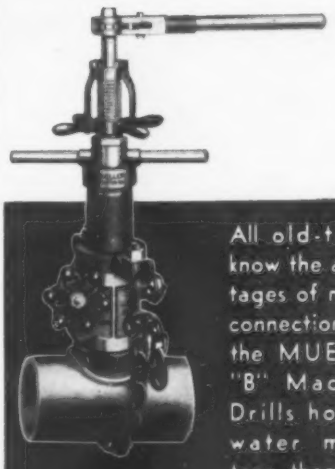
Individually Designed for Industrial Concerns Commercial or Organization

Write For Details To Division 12

EMPIRE BRONZE

BETHESDA 14, MARYLAND
N.Y. OFFICE 475 5TH AVE.

Saves time



All old-timers know the advantages of making connections with the MUELLER "B" Machine. Drills holes in water mains, taps them, and inserts or removes corporation stops. All under pressure, too! No water shut-off, no trouble, no muss. Saves time also. Your men will like it. They can make better connections. Sizes ½" to 1" inclusive. . . . Write us today.

MUELLER CO. FOUNDED 1857
DECATUR 70, ILL. LOS ANGELES 23, CALIF.

How to Build Big Sewers QUICKLY

This storm sewer job along the East Coast really "marched" because the engineers used rugged ARMCO MULTI PLATE *Arches with their quick assembly and backfilling features. No delay, no form-work, no curing. The installation has a 20-ft. span, 10-ft. rise and is 1800-ft. long.*

Design and construction of large storm or intercepting sewers can be simple and quick.

For spans ranging from 10 to 28 feet, ARMCO MULTI PLATE Arches provide a logical form of construction. First is the reinforced concrete base with low, grooved "abutments" at either side to support the arch plates above the flow line. Next is quick assembling and bolting of the MULTI PLATE arch, followed immediately by backfilling *directly against the metal.*

No delay, no complicated formwork, no waiting for the arch to cure. Curved alignment, connections and manholes are no problem.

Why not have all these advantages for your large sewer jobs? Write our nearest office and ask for descriptive bulletin on "ARMCO MULTI PLATE Pipe and Arches." Armco Drainage & Metal Products, Inc., and Associated Companies, 865 Curtis Street, Middletown, Ohio.

ARMCO MULTI PLATE SEWERS

MULTI ARMCO PLATE

The Sunswitch light control designed to provide required illumination regardless of weather conditions

New Street Lighting Control

The new Electronic "Sunswitch" announced by The Ripley Co., Torrington, Conn., is designed to control street lighting services to insure required illumination regardless of fluctuations in weather conditions and the twilight hour.

The new unit will be priced low enough to permit installations on each light pole, eliminating series circuits and heavy operating costs due to storm hazards.

All parts are designed for maximum safety. For example, there are standard amplifier tubes and a photo-electric cell and relay with special tungsten alloy contacts on the relay.

During daylight the control provides a minimum "lights on" period from 25 minutes after sunset to 25 minutes before sunrise and adjustment is provided to meet customers' specific requirements.

The operating unit is compactly built on a chassis to which the housing is attached by three screws. This is simply fastened to a permanently wired base which provides a perfect "plug in" connection and a weatherproof joint. The swivel bracket and the round shape of the housing permits direction of the photo-cell of each unit to the north light without interfering with symmetry in installation. The housing is constructed of non-rusting aluminum with high resistance to bright sunlight and other extreme weather conditions.

Alcoa President Discusses Company's Plans for 1946

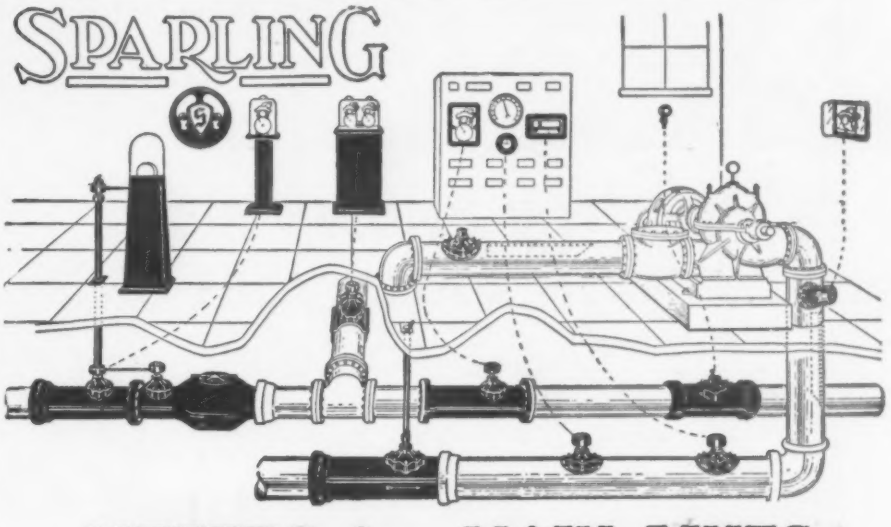
The nation's aluminum industry is putting into effect intensified 1946 sales campaigns to promote the greatest possible use of the metal, according to a recent statement by Roy A. Hunt, President of Aluminum Company of America, Pittsburgh, Pa.

According to Mr. Hunt, aluminum emerged from the war a better metal for many new purposes and manufacturers and fabricators plan to take advantage of these conditions to utilize efficiently enlarged production facilities for primary aluminum, and the heavy supply of scrap now available.

Alcoa is planning expansion in its sales force and distributing program, Mr. Hunt stated. The company recently opened eleven new regional sales offices and is planning to open five more, some in areas where Alcoa previously had no direct sales representation. The company is now selecting qualified men for sales engineering work and preparing them through training programs in its various works. Many of these men are returned servicemen.

As evidence of the growing acceptance of aluminum for new applications, Mr. Hunt said the industry will depend for volume, in part, on applications comparatively little known till now in a number of the largest industries. Alcoa sales engineers are calculating the lightening of such specialized railroad equipment as trucks, brakes, air conditioning equipment, and lighting systems. Many other forms of transportation, such as trucks, trailers, buses, and airplanes will employ large quantities of aluminum.

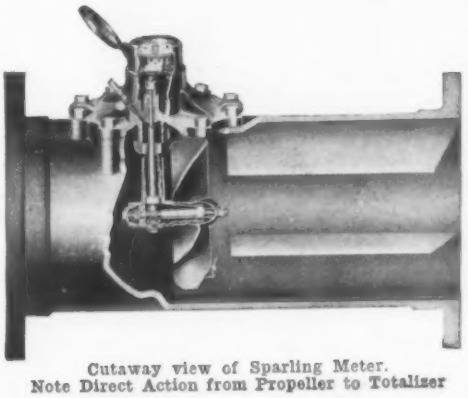
SPARLING



METERS for MAIN-LINES

TOTALIZATION— Every Sparling Meter is a complete Totalizing unit. Easily installed as shown —in a tube section or saddle-mounted on the line.

INDICATION— On the wall, right, is shown a Totalizer-Indicator. Also a "Town Clock" Indicator is mounted in panel.



Cutaway view of Sparling Meter.
Note Direct Action from Propeller to Totalizer

RECORDING— Four of the types of Sparling Indicator-Totalizer - Recorders are shown — pedestal type; forward and reverse flows type; panel mounted; and 60-day straight-line strip-chart.

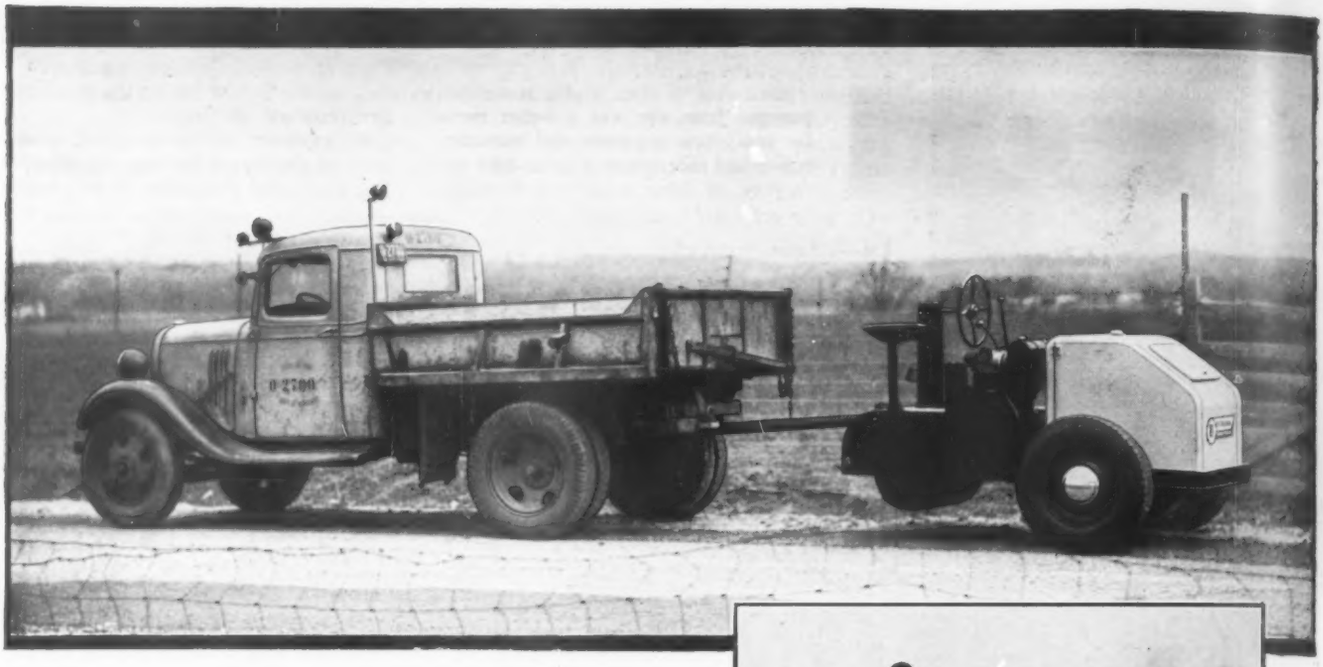
CONTROL — Auto - metered controls, both mechanical and electrical. Note Bell & Spigot Compound Meter with solid extension to Chlorinator.

For details and prices see Bulletin 308, sent upon request.

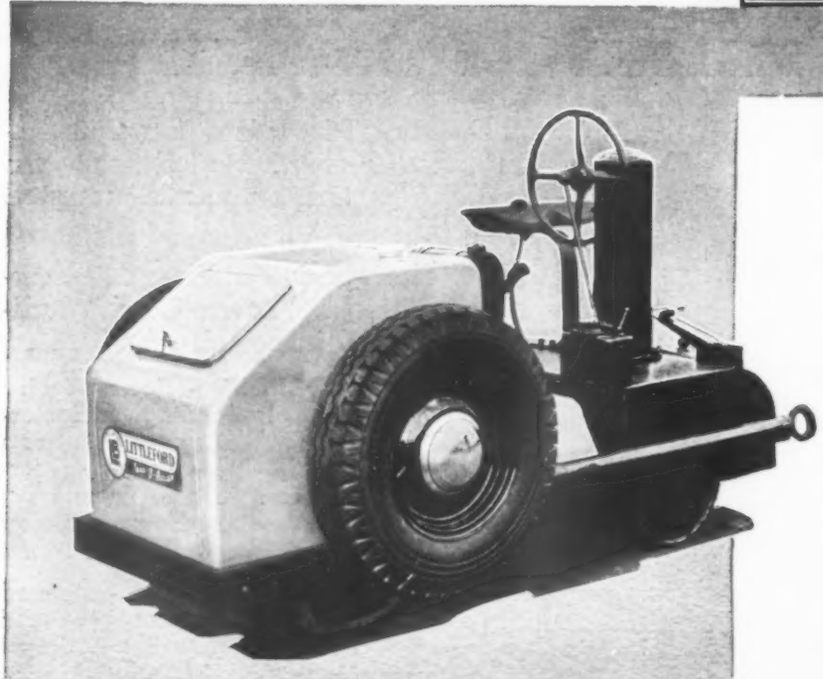
R. W. SPARLING

Manufacturer of Water Measuring Equipment

LOS ANGELES 54—Box 3277 Terminal Annex
CHICAGO 16—3104 South Michigan Ave.
BOSTON 8—6 Beacon Street
622 Broadway—CINCINNATI 2
101 Park Avenue—NEW YORK 17



DO YOU KNOW HOW MANY PATCH JOBS THIS TRAIL-O-ROLLER WILL DO IN ONE DAY?



Just as many as you trail it to—because the Littleford Trail-O-Roller will trail behind a truck as fast as the truck will go. And that isn't all—the Trail-O-Roller has a *Patented* Hydraulic Raising and Lowering device that changes it from a Trailing to Rolling position or Rolling to Trailing position in 2 minutes' time. It's designed to roll those patches and to make them permanent.

The Trail-O-Roller gives as much compaction as a five ton tandem, yet has the added features of being portable, easy to operate and above all, cuts the operating cost of rolling.

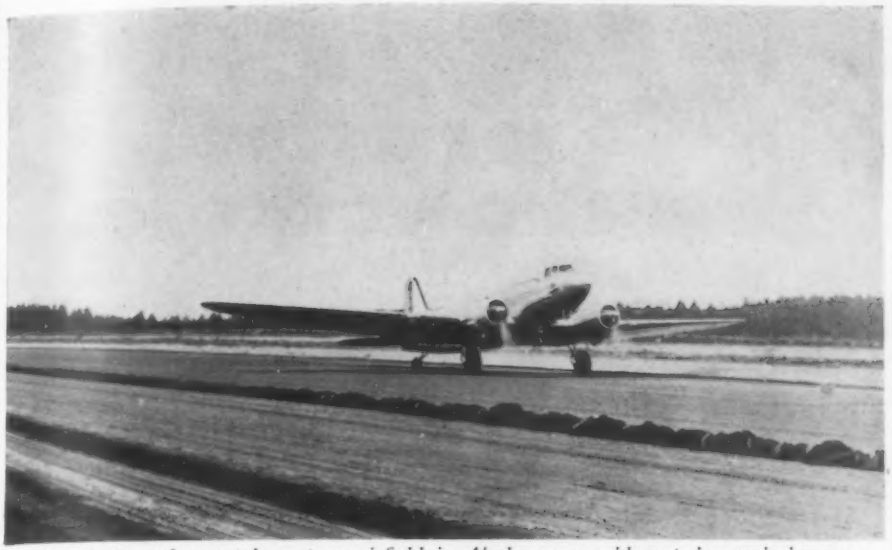
For Road, Street and Highway Rolling the Trail-O-Roller is the Unit to do the modern job. For Better Roads use the Best Equipment — Littleford Black-Top Road Equipment.

BLACK TOP ROAD MAINTENANCE EQUIPMENT LB SINCE · 1900

LITTLEFORD

LITTLEFORD BROS., Inc.

500 E. PEARL ST., CINCINNATI 2, OHIO



This photograph was taken at an airfield in Alaska on a cold, wet day and shows a heavy plane landing on a Bitumuls-sand mix runway still under construction

Bitumuls-Sand Mix Pavement

If you are blessed with an abundance of sand or sandy soil, or can obtain it at low price, the American Bitumuls Company, 200 Bush Street, San Francisco 4, Calif., recommends that you use it in your next street paving program. This suggestion is outlined in their recently issued brochure, which gives details of 10,000,000 sq. yds. of successful sand-mix surfacing on military airfields and roadways, which has made outstanding records for rugged durability under heavy airplane and truck loadings.

According to the brochure, many sands which are not suitable for other types of paving can be treated with Bitumuls to make hard, firm, water-repellent base and surface. The results agree with the lengthy experience of the Florida Road Department, which in its Bulletin No. 4 states that stable asphalt sand-mix pavements can be built with sands of the poorest grading, provided the particles themselves are angular and sharp. Moreover Bitumuls is highly efficient in mixing with fine materials, such as sands, silts, and their earthy components. "Setting" does not depend only upon exposure, but occurs simultaneously in the interior portion of the mix. The fresh Bitumuls-Sand Mix sheds rainfall even before compacting, and climatic conditions and weather are not critical. Since Bitumuls is an emulsion of asphalt and water, it coats moist sand without the expensive operation of pre-drying and heating. The amount of Bitumuls to use is determined by formula based upon the sand grading analysis, and is a function of the surface areas to be covered.

The company furnishes the services of its field and laboratory engineers to cooperate in investigation, and for formulation of procedure.

Iron & Steel Products Makes Appointment

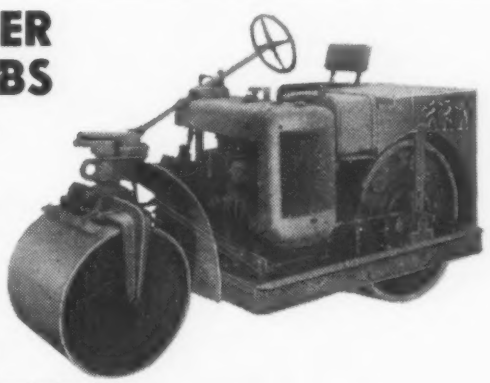
E. D. Connell, Manager of the Merchant Iron & Steel Dept., Iron & Steel Products, Inc., Chicago 33 (Hegewisch Station), Ill., has been elected vice-president, according to a recent announcement.

This company buys, sells, and trades iron and steel products.

A TOUGH ROLLER FOR TOUGH JOBS

Pierce-Bear 3½-5 Tons, Variable Weights

Engineered for economical operation where the going is tough. Compact, easy to operate. Rear roller gives heavy duty compression. Built-in water tanks for wet rolling. Powered with Allis-Chalmers Industrial Heavy Duty Model "B" gasoline engine. Write for details.

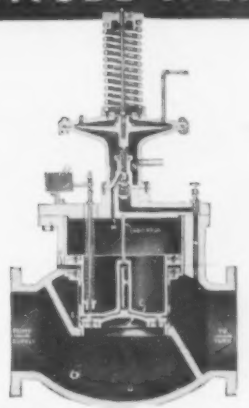


Manufactured by

H. W. LEWIS EQUIPMENT COMPANY

415-431 Hoefgen Ave. SAN ANTONIO 6, TEXAS Phone Garfield 6137 or 8931

AUTOMATIC "STOP-STARTER" GOLDEN-ANDERSON ALTITUDE VALVES



Eliminate all water surges and shock

Installed where a single line is used for both supply and discharge, the valve will maintain a constant water level within 3" to 12" variation and by means of the "stop-starter" switch stops the pump as the valve closes.

Let GOLDEN-ANDERSON Engineers, Solve your Flow Control Problems!

GOLDEN-ANDERSON Valve Specialty Company

ROADMASTER Street Sweeper WIRE

High Scleroscope Rating Uniform temper.

Specially processed for high fatigue — against breakage. Long wearing. Conveniently cut and delivered in 100 and 200 lb. boxes. Prompt shipment from stock of all standard sizes.

This gutter broom wire will prove an economy in your service.

"MORE MILES PER BRUSH"

JOHNSON Steel & Wire Co., Inc.

Worcester 1, Massachusetts

New York Akron Chicago Detroit Los Angeles Toronto

The Right Truck FOR EVERY PUBLIC WORKS JOB

TRUCKS of the right size, power and carrying capacity! That's one angle to truck efficiency on public works.

Efficient maintenance! That's another.

And here's what International offers:

1. A sales and engineering organization that really knows the truck problems in the public works field.

2. The most *complete* line of trucks made—everything from light delivery units to giant six-wheelers. International, therefore, can furnish exactly the right trucks for your work.

3. Maintenance and service furnished by a network of International Truck Dealers and a system of International Branches that form the nation's largest company-owned truck-service organization.

In the last 15 years more heavy-duty International Trucks have been purchased for civilian use than any other make. Into each International goes more than 40 years of truck engineering and manufacturing experience. So contact your International Dealer or Branch now—for the right trucks—backed by top maintenance—for your truck jobs.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

LISTEN TO "HARVEST OF STARS" EVERY SUNDAY! NBC NETWORK

INTERNATIONAL

INTERNATIONAL *Trucks*

New Insulation Improves Electric Motors

Silicon insulation, while not a cure-all for insulation problems, definitely ushers in a new era in insulation performance, says the Westinghouse Electric Corporation, East Pittsburgh, Pa. The new insulation has been applied to a wide variety of electrical equipment. Several motors for trolley coaches and streetcars have been so treated. Powerhouse auxiliary-drive motors that must operate in high ambient temperatures have benefited from silicon. It has remarkable ability to resist moisture absorption, even under adverse conditions of humidity and extreme temperature range. Rubber insulation could withstand the moisture but not the heat; asbestos, the heat but not the moisture. Silicon can survive both.

Soft Water Service

A new soft water service is now available to residents of your municipality on a basis very much like electricity and the telephone. A local service dealer installs a simple unit which softens hard water by removing calcium and magnesium through the use of zeolite.

The unit is serviced at regular intervals with no responsibility on the customer's part. As with other utilities, a modest monthly service charge takes care of everything. Reports of the Water Conditioning Institute show that the results are uniformly silky-smooth, soft water for washing, bathing, cooking, and drinking. The service was originated by E. J. Culligan and is now distributed by the Culligan Zeolite Co., Northbrook, Ill.

New Cartwright Hot Spray Bar

A new hot spray bar for the distribution of bituminous materials is now available from The Cartwright Asphalt Equipment Co., North Robinson, Ohio.

This new bar is of double construction; the material enters the inner pipe which carries it to the very ends of the bar, then it circulates back through the entire length of the outer pipe, and on out the spray nozzles or back into the supply tank. This circulation of material is always under positive pressure from a rotary pump.

This full circulation throughout the entire length of the bar is made possible by a patented joint construction in which the end sections of the bar are joined to the main section, set at an angle of 45 degrees. Both the inner and outer pipe sections of the joint have a contact which permits the two end sections to swing from a vertical to a horizontal position and without interfering with the circulation of material. It is further claimed that the end sections will swing free if they hit a solid obstruction either from the front or rear.

Another important feature is that the valves are located right in the spray nozzles, giving instant "full-on" or "shut-off" control without drip.

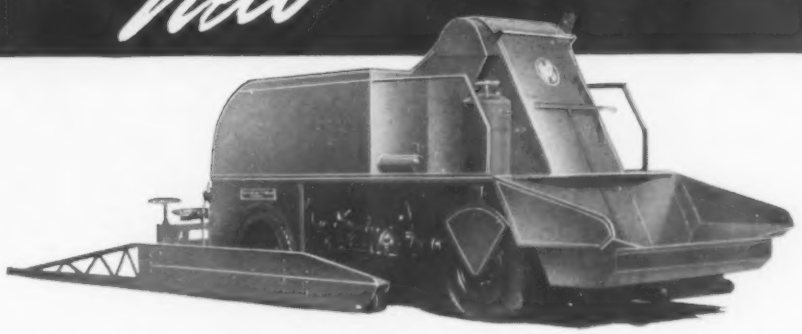
The Cartwright Hot Spray Bar can be attached to any distributor and is available in several different lengths to suit any need.

GE Names Manager of Emergency Communication Equipment

Nat Gada has been appointed by General Electric Co., Schenectady, N. Y., as sales manager of emergency communication equipment in the transmitter division of the electronics department according to an announcement by James D. McLean, Division Manager of Sales. His headquarters are at the Thompson Road plant, Syracuse, until the new Electronics Park headquarters plant is built.

A veteran of World War I, he was named an engineer at the River Works after completion of his studies at M.I.T. Assignments in the Central Station Division at Schenectady and as lighting specialist at the New Haven and Chicago offices followed and since 1926 he has been employed in various engineering and sales capacities with General Electrical in Lynn, Mass., Schenectady, Chicago, and New Haven, Conn.

the New MOTO-PAVER



A Complete Traveling Mixer and Paver

Here, in one entirely self-contained and self-propelled unit, is a machine that does the complete mixing and paving job. The H & B Moto-paver mixes, spreads and lays any type of mixed-in-place bituminous material to any road width, thickness and crown condition. No separate loader, spreader or other paving equipment is needed—no trailer to haul it from one job to another.

The Moto-paver is powered by two gasoline engines—one driving the mixer and related units, the other driving the machine along the road. Paving speed is 4 to 50 feet per minute, road speed up to 18 miles per hour. Mixing capacity is 100 to 120 tons per hour.

The Moto-paver handles any medium type or low cost material, and is especially suitable for resurfacing trunk roads and streets of smaller municipalities. It is also an efficient unit for new construction work on roads, streets, airports, parking lots, driveways, etc.

Bulletin MP-46, giving complete information and specifications, will be sent on request.

HETHERINGTON & BERNER INC.
719 Kentucky Ave. • Indianapolis 7, Ind.

H&B Hetherington & Berner

BUILDERS OF PORTABLE AND STATIONARY ASPHALT PLANTS OF ALL TYPES AND CAPACITIES

. . . not with the Gardner-Denver Backfill Tamper! This tamper mechanically compacts the backfill to meet the most exacting requirements—*and does it fast.*

Easily walked over the fill and balanced for smooth handling, the Backfill Tamper cuts down operator fatigue. Power consumption is remarkably low. And neither the valve nor the exhaust has a tendency to freeze in cold, damp weather.

Speed up operations with the rugged Gardner-Denver Backfill Tamper. For complete information, write Gardner-Denver Company, Quincy, Illinois.

INTEGRAL OIL RESERVOIR *assures complete lubrication.*

CYLINDER BORE SPECIALLY BURNISHED—*highly wear-resistant.*

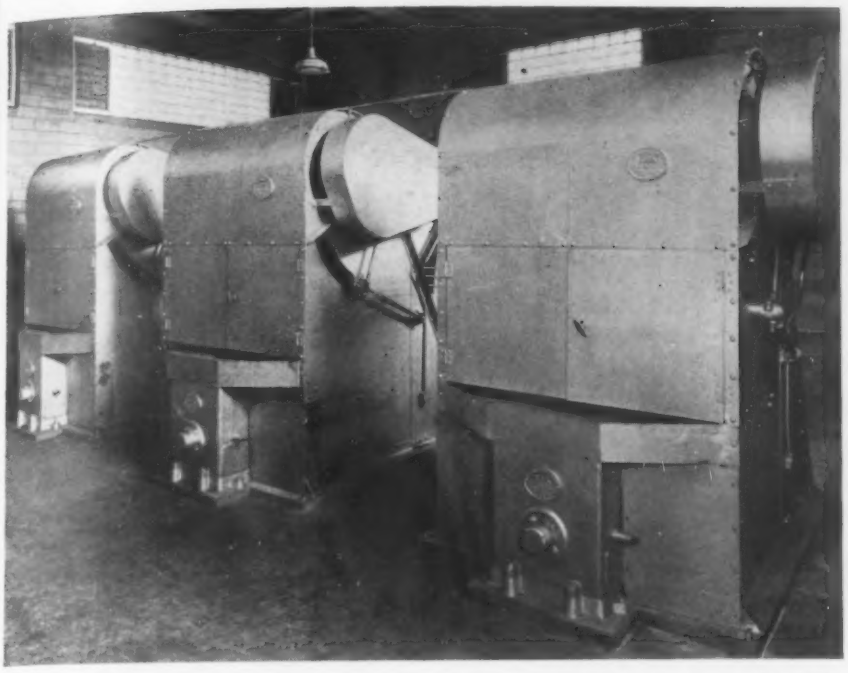
LOW LIFT END SEATING VALVE *provides efficient piston action over a long period of time.*

TAMPING PAD FIRMLY SECURED *on piston rod by tapered shank and tapered lock nut.*

DESIGNED FOR SIMPLE MAINTENANCE.

GARDNER-DENVER
Since 1859

Rex Bar Screens in Denver, Colo.



A battery of three Rex mechanically cleaned bar screens constitutes one of the first phases of treatment at the 54-mgd sewage treatment plant serving Denver, Colo. This plant, designed for an ultimate population of 348,000, has a continuous removal mechanism in its grit chambers that immediately follow these bar screens. The plant uses chemical treatment with the flocculation tank having both air and mechanical agitation. The settling tanks are equipped with sludge removal mechanisms. A magnetite filter further improves the effluent which receives post chlorination before being discharged into the South Platte River.

Asphalt Use in Delayed Road Maintenance Estimated

George R. Christie, newly-elected president of The Asphalt Institute, 801 Second Ave., New York 17, N. Y., pointed out recently that an effective program to handle delayed maintenance of road surfaces should require 6,000,000 tons of petroleum asphalt in 1946. In addition to that used in maintenance, he added, 2,000,000 tons of petroleum asphalt may also be used on new road and street construction.

George R. Christie

This prediction was made recently at the annual meeting of the Board of Directors of the Institute when Mr. Christie was elected president and chairman of the executive committee. Mr. Christie has been connected with Socony-Vacuum Oil Co., Inc., for the last thirty years and continues as asphalt manager of the Eastern Marketing Division. He has been associated with the Institute since its inception 26 years ago.

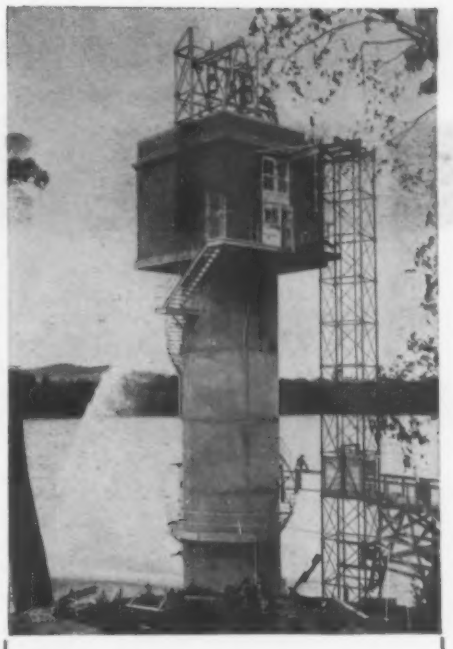
Five vice-presidents were also elected as follows: Division F, Atlantic Gulf, F. R. Field, Standard Oil Co. of N. J.; Division II, Ohio-Great Lakes, D. H. Jenks, Jr., Ashland Oil & Refining Co.; Division III, Mid-West, Burrill Ennis, Derby Oil Co.; Division IV, South-West, V. R. Black, Anderson-Prichard Oil Corp.; Division V, Pacific Coast, W. G. Julier, General Petroleum Corp. of Calif.

Bernard E. Gray was re-elected general manager-chief engineer; and Herbert Spencer, secretary of the Institute. F. V. Widger, Witco Chemical Co., was elected treasurer.

New General Offices for Clay Sewer Pipe Association

General offices of the Clay Sewer Pipe Association, Inc., have been moved to the Huntington Bank Bldg., 17 South High St., Columbus 15, Ohio. Larger offices were needed because of the company's new expansion program. The new offices will provide floor space nearly three times as great as that previously maintained.

The officers of the association announce that an expansion is also being made in the field engineering staff. The research and promotional work already carried on by the association for the benefit of the engineering and architectural field and the consumer market, as well as for the manufacturers of clay sewer pipe and allied products, will be greatly intensified by the addition of new engineers. The additional field engineering personnel will be for the most part World War II veterans.



4,000,000 GALLONS PER DAY from a typical Ranney Collector located on the Bank of the Ohio River with pump house above Flood Level.

RANNEY METHOD WATER SUPPLIES INC.

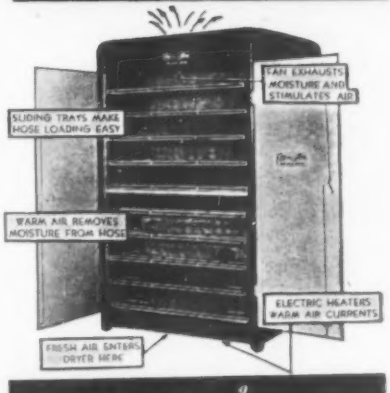
HEYBURN BLDG., LOUISVILLE, KY.

WATER SUPPLY ENGINEERS & CONTRACTORS

CIRCUL-AIR

FIRE HOSE DRYER

- Is easier to use
- Saves drying time
- Reduces hose stretch
- Prevents mildew and rot
- Improves building design
- Air-conditions as it dries


SLIDING TRAYS MAKE HOSE LOADING EASY
FAN EXHAUSTS MOISTURE AND STIMULATES AIR
WARM AIR REMOVES MOISTURE FROM HOSE
ELECTRIC HEATERS WARM AIR CURRENTS
FRESH AIR ENTERS DRYER HERE

THE CIRCUL-AIR CORPORATION

6339 East Palmer Avenue

DETROIT 11, MICHIGAN

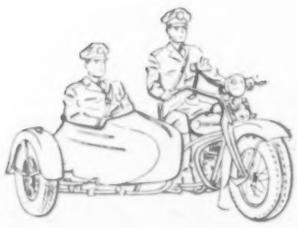
New Philadelphia, Ohio — like hundreds of American cities large and small — knows the effectiveness of Harley-Davidson Police Motorcycles. Shown from left to right are Patrolman Robert Clark, Chief of Police Emory Gintz, and Patrolman Cyril Gintz.

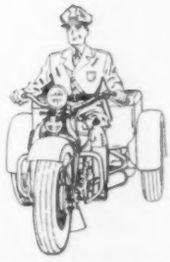
HARLEY-DAVIDSON MOTORCYCLES

Help Solve Today's Greater Traffic Problems In Cities of ANY Size

Today, police departments need Harley-Davidson's greater range of action and service *more than ever before!* With automobile travel at new "highs," and with speed limits lifted, old cars and old tires are traveling more miles at greater speeds — over highways badly battered by severe war-time usage. What's more, many new drivers — and others who have not regained their prewar driving care and skill — are operating cars. The traffic toll of injuries and deaths is already rising alarmingly! With depleted personnel, many police departments are heavily overworked. Call in your Harley-Davidson dealer and get complete particulars about the advantages of equipping your department with an adequate number of Harley-Davidson Police Motorcycles and Servi-Cars.

HARLEY-DAVIDSON MOTOR CO.
Milwaukee 1, Wisconsin





HARLEY-DAVIDSON
Police Motorcycles

Sterling Engine Elects New Member to Board

Robert E. Dillon has been elected to the Board of Directors of the Sterling Engine Co., Buffalo, N. Y., according to a recent announcement by Addison F. Vars, president.

Robert E. Dillon

In addition to his directorship in the Sterling Engine Co., Mr. Dillon is also president and general manager of the Lake Erie Engineering Corp.; director of the Marine Trust Co., Air Investors, Inc., of New York City, and several other financial and manufacturing companies. He takes part in many civic and philanthropic activities.

The following officers of the company were also elected: Spencer H. Logan, chairman of the board; Charles A. Criqui, vice-chairman of the board and director; Addison F. Vars, president, general manager, treasurer and director; Hans Bohuslav, vice-president-in-charge- of engineering and director; Frank G. Raichle, secretary and director.

Other directors are: William J. Conners, Jr., publisher of the Buffalo Courier Express; Lewis G. Harriman, president; Manufacturers & Traders Trust Co., Buffalo, N. Y.; Carroll E. Gray, Jr., chairman of the board, United Aircraft Products, Inc., Dayton, Ohio; Fred C. Rummel, president, Burr & Co., New York, N. Y.

F. D. Crowther Returns to General Electric

F. D. Crowther has resumed his position as sales manager of the Lighting Division of General Electric Co., Schenectady, N. Y., after 3½ years with the armed forces.

Fred Crowther

He was called to service in 1942 when a captain in the Signal Corps, Officer Reserve Corps and attained the rank of colonel.

He served with General MacArthur's occupation forces in Japan after two years of duty in various combat zones of the Central and Southwest Pacific areas where he was awarded the Legion of Merit and the Bronze Star.

Bucket unloads in less than a minute under fingertip control.

Automatic, hydraulic-operated packer plate packs 20 yds. in a 10-yd. body.

Tapered body construction assures speedy discharge regardless of compression.

This new HEIL
COLECTO-PAK
Municipal Refuse Disposal Body

gives you

★ Low loading height
★ Double capacity
★ Complete enclosure
★ Easy maintenance

The all-enclosed, water-tight Heil Colecto-Pak is the answer to your search for a modern method of speeding-up, simplifying, and improving garbage collection and disposal.

This unit has a ¾-yard loading bucket at a 35-inch height making it extra easy to load. This "power-lifted" bucket deposits load and returns to starting position in less than a minute. At the same time the hydraulic-operated packer plate is compressing the material down toward the discharge end. It is possible to compress 20 yards of wrapped garbage into this 10-yard body.

With this unit your city has a clean, sanitary means of collecting garbage with none of the unsightly and unsanitary features imposed by "open body" collectors. Your city can feel proud of its advanced thinking in purchasing a Heil Colecto-Pak.

BH-114

Write for bulletins.

ARMY NAVY
THE HEIL CO.
GENERAL OFFICES • MILWAUKEE 1, WISCONSIN

SKIDPROOFING
QUICKEST AND BEST PROTECTION!

Skidproofing remains the best method of protecting motor traffic on icy highways. With prepared abrasives, safety can be provided in a matter of minutes. Most accidents occur on icy highways in the early stages before motorists become accustomed to the dangerous driving condition.

Adequate stockpiles of unfrozen abrasives are the best insurance for winter highway safety because they provide means for instant skidproofing.

Abrasives treated the calcium way are unfrozen. They load easily and spread quickly and they act fast. They dig into and stick to the glare ice to provide a sandpaper-like surface that gives real traction. They save money because they go farther and stick longer.

Let us send you our Bulletin 27 — "Skidproofing Icy Roads and Streets."

CALCIUM CHLORIDE ASSOCIATION
4145 Penobscot Building • Detroit 26, Michigan

ICE CONTROL WITH
CALCIUM CHLORIDE
FAST • POSITIVE • ECONOMICAL

Gears Icy Roads to Tires

John M. Dolan, recently appointed Vice-President in charge of Sales of Le Roi Co., conferring with Cecil W. Brown, newly appointed General Sales Manager

Le Roi Co. Announces Personnel Promotions

John M. Dolan has been appointed vice-president in charge of sales for the Le Roi Co., Milwaukee, Wis., manufacturers of engines, air compressors, generator sets, and specialized highway-airport-railway mowers. Mr. Dolan joined Le Roi in 1943 and since then has been active in establishing over-all merchandising programs, covering all phases of the product line in both domestic and foreign fields. During this interval the company's distribution system has been expanded through the medium of district offices.

Before coming to the organization he was with Dryden Rubber Co., in Chicago and later was associated with the Sullivan Machinery Co. in the general sales division, where he was first assistant to the general manager of the Western plant of the company and later manager of the compressor division.

Cecil W. Brown was named general sales manager succeeding Mr. Dolan. Mr. Brown has been with Le Roi since 1938, and has held positions including chief draftsman of the air compressor department, co-ordinator of government contracts, assistant purchasing agent, superintendent of the assembly and test department, field engineer, and assistant sales manager. Prior to his association with the Le Roi, he was a designing engineer for one of the heavy machinery manufacturers.

Arthur A. Ladwig has been appointed vice-president in charge of manufacturing. Mr. Ladwig has been with Le Roi since May 1923. He started in the shop and spent a number of years in the accounting department before being promoted to production manager in 1936. He assumed the responsibilities of general superintendent in 1938 and works manager in 1942. He began his industrial career with Allis-Chalmers Mfg. Co. in 1921.

APCO-V-APCO PRIMERS

AUTOMATIC
POWER
OR
TANK PRIMERS

AIR RELEASE VALVES

FOR
FILTER PIPE LINES
DISTRIBUTION LINES
AND OTHER USES
17 TYPES

VALVE AND PRIMER CORPORATION

Room 366—111 W. Washington St.
CHICAGO, ILL.

Get More
MILES PER HOUR
LINES PER GALLON

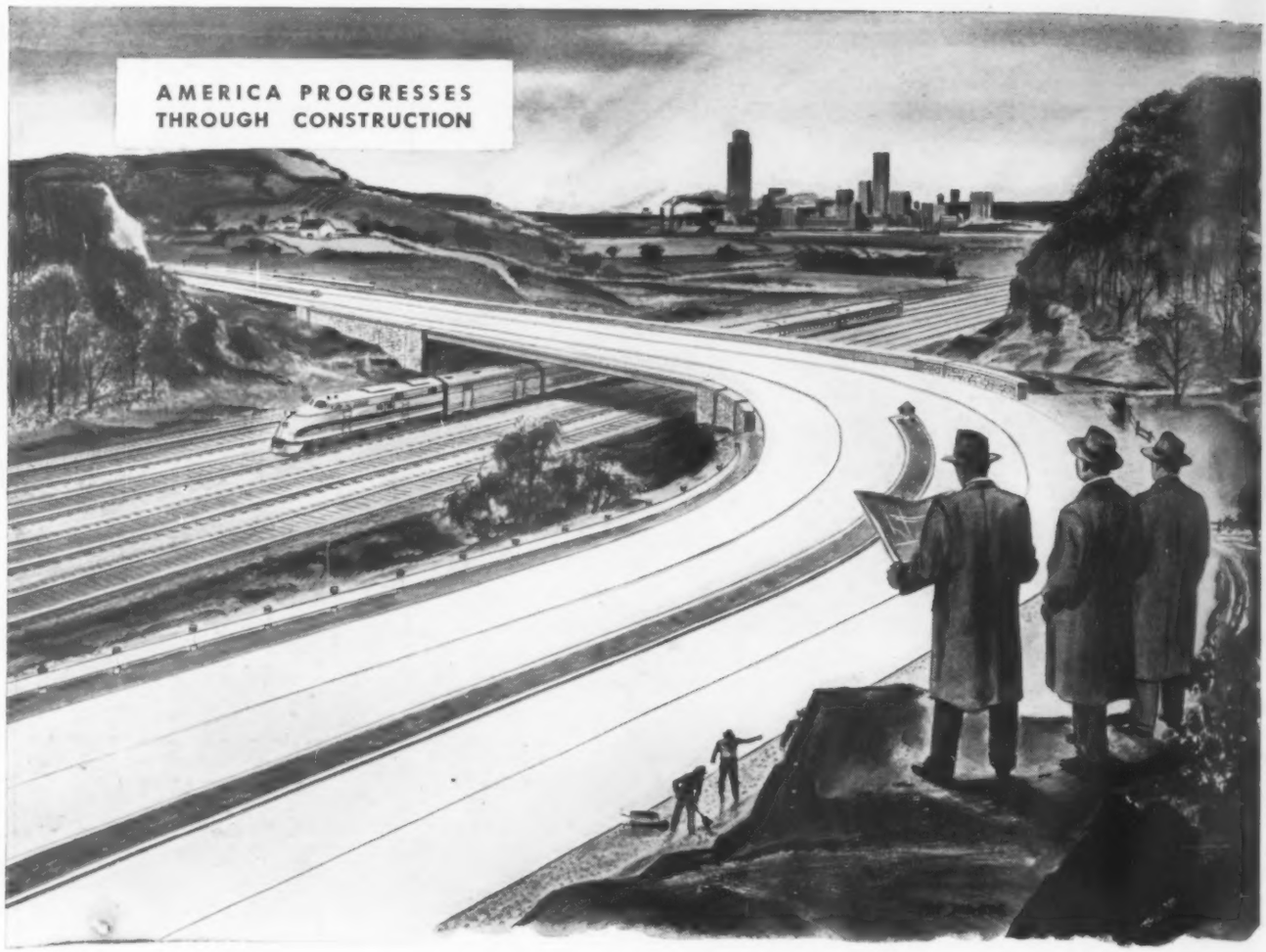
Speed up your street striping job the easy M-B way. You can get up to 15,000 feet of double line striping per hour per man *plus a greater saving* in material used with the M-B Self-Propelled Model. This sturdy, easy-to-handle unit sprays just the amount of paint needed and *no more* for clean, well-defined lines. It cuts costs and steps up efficiency. Write for prices and delivery information today.

MEILI-BLUMBERG CORPORATION
Box AC-2
New Holstein, Wis., U.S.A.

MARKERS

Easily and quickly convertible to an all-purpose paint sprayer for painting machinery, park benches, traffic signs, guard rails, curbs, etc.

M-B Self-propelled Model



Public Benefits will be Great in the NATION'S HIGHWAY PROGRAM

A large proportion of the nation's highways throughout the nation are scheduled for improvement in the next few years. This means an era of better, safer driving.

So tremendous a job is one for experts, capable of directing the work with the maximum economy, efficiency, speed and consideration for the needs and convenience of the public.

Highway officials, engineers and contractors have the experience, the technical knowledge and the determination to handle the work most effectively. Moreover, in carrying out this great modernization program, they know that it is essential to minimize delays and inconvenience to the public, which will be driving more than ever after so many restrictive years. A.G.C. contractors have an important place in this program. They can be depended upon to serve faithfully and well, because of the business principles for which the A.G.C. emblem stands.

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA · A G C · SKILL · INTEGRITY · RESPONSIBILITY · REG. U.S. PAT. OFF.

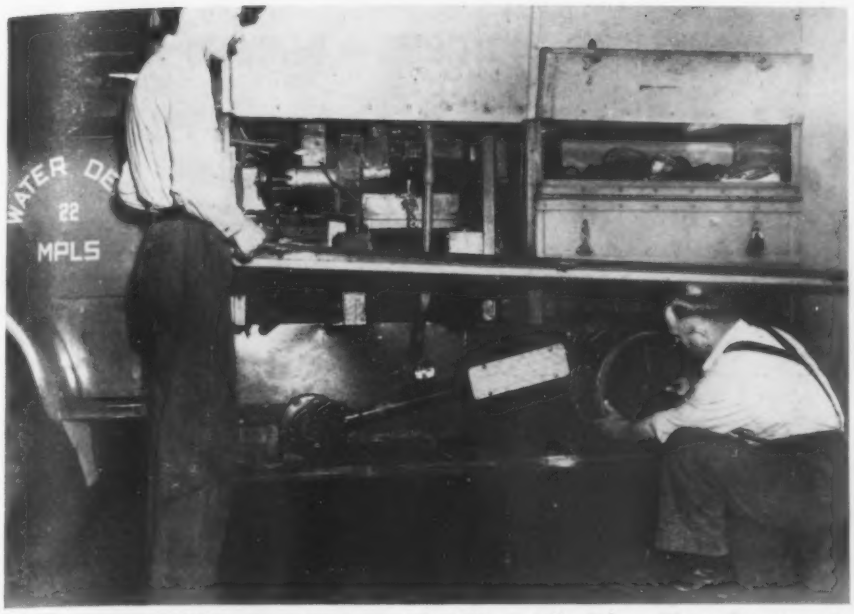
This advertisement is No. 4 of this series

THE ASSOCIATED GENERAL CONTRACTORS of AMERICA, Inc.

Ninety Branches and Chapters Throughout America

National Headquarters — Munsey Building, Washington 4, D. C.

SKILL, INTEGRITY AND RESPONSIBILITY IN CONSTRUCTION OF BUILDINGS, HIGHWAYS, RAILROADS, AIRPORTS AND PUBLIC WORKS



Elwood Johnson, Maintenance Worker of the Minneapolis, Minn., Water Department, inspects device used for closing water mains. Model WCT-3 (partly shown at top) furnishes power for operating the equipment

Water Works Maintenance Aid

Whenever a break occurs in the main lines of the Minneapolis water supply system, a large water main can be closed down in fifteen minutes by one workman. The water department has greatly reduced the time required for making main repairs by the use of an Onan electric generating plant manufactured by D. W. Onan & Sons, 43 Royalston Ave., Minneapolis 5, Minn., to drive the electric motor of a Toledo Universal Power drive and adjustment device.

Model WCT-3 Onan electric plant is a 3,000-watt unit mounted in a compartment of the maintenance truck where it is easily accessible for servicing and inspection. Supplying standard 115-volt, 60-cycle single-phase alternating current, the plant can power operating water pumps, drill press, grinder and buffer, ventilating blower, interior lights, and spotlights.

Two other portable Onan plants, models 6DAL and 12DAL are used by the Maintenance Department to provide power for auxiliary floodlighting. These 650-watt and 1,250-watt direct current units are constructed of aluminum, and driven by single-cylinder, air-cooled Onan gasoline engines.

Commander Miscall Returns to Consulting Field

Leonard Miscall, consulting engineer on municipal problems is reopening his offices at 114 Parker Pl., Ithaca, N. Y., after serving as a commander in the Navy. Commander Miscall received the Bronze Star for service in the Philippines.

Before entering service, Mr. Miscall was active in the New York State Conference of Mayors and served on several of its committees. He was chairman of the Ithaca Planning Commission for several years. In 1935 he was a member of the Emergency Flood Control Commission. In 1941 and 1942 he acted as consultant to the New York State Division of Housing and developed the policy for state financed housing in upstate cities.

LIFTER WORM LOCK

In removing the lid from a Ford meter box cover the action of unlocking provides a powerful screw-jack effect which raises the lid from the frame, breaking the seal of ice or dirt.

Turning key in the unlocking direction attaches it to the bolt head so key serves as a handle for lifting the lid. The action of locking releases the key.

Send for catalog of Ford Meter Box Covers

FORD
Meter Box Co.
WABASH, INDIANA

South Bend **GUTTER-SNIPE**
Pick-up Street Sweeper

MUNICIPAL SUPPLY COMPANY
Manufacturers
Street Sweepers
Street Flushers
Bituminous Distributors
SOUTH BEND 23, INDIANA
EXPORT DEPARTMENT, 44 Whitehall Street, NEW YORK 4, N. Y., U. S. A.

FOR DURABILITY THAT MEANS ECONOMY IN UNIFORMS — *DEMAND*

REEVES ARMY TWILL

"FROM COTTON TO CUTTER"

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New Container for Carbon Paper

Announced recently by the Underwood Corporation, One Park Ave., New York 16, N. Y., is a new carbon paper container designed by Frank Giannino, a New York industrial designer. The container holds 100 sheets of carbon paper and has a single-sheet release through a sliding tray arrangement which eliminates the former inside folder and the necessary opening and closing of the box. This permits easy access without thumbing, sorting, smudging of the fingers. A separate storage space protects partly used carbon paper returned for further use.

Stanley Engineering Enlarges Staff

Marvin O. Kruse and H. Sidwell Smith have been made partners in the firm of Stanley Engineering Co., Muscatine, Iowa, according to a recent announcement.

Mr. Smith has been with the firm since 1932 and has been active in its water supply and sewerage projects. He is a graduate of the University of Iowa in sanitary engineering.

Mr. Kruse began working for the company in 1933, specializing in land drainage work. For the past 3½ years he has been serving as an officer in the Engineer Corps.

Diatomaceous Earth Filter Handles Tough Water Problem

One of the most recent filters in the water or liquid treating field is Infilco's Stellar Type filter utilizing diatomaceous earth. It draws on the war-developed principle of filtering through this type of medium supported on a rigid foundation. Army engineers were able to construct filters in this way that were much lighter than sand filters.

The Stellar filter operates in an interesting but simple manner. In its design a small charge of filter-aid (diatomaceous earth) is mixed with a small quantity of water. Then a raw liquid is passed into the filter and passes through the filter areas of the Stellar elements into their central liquid channels and then out to the discharge chamber of the housing to the services.

As the filter goes into operation the filter-aid settles evenly over the filtering surfaces of the elements. This forms a firmly deposited coating which after a short period of filtering to waste produces a sparkling clear liquid.

When the filter becomes clogged the operator merely stops the filtration process and the complete coating of filter-aid and cake drops to the bottom of the housing. After the coating is dropped completely, taking only a matter of a few seconds, liquid is again pumped into the filter. This agitates and breaks them up and distributes them on the surfaces of the Stellar elements.

While re-forming the cake, the liquid is filtered to waste, or back to source, until the filtrate appears clear. This requires only a few seconds after which the filtrate is switched back to the service.

The filters are particularly well adapted to small installations requiring an exceptionally high quality filter. The units, built by Infilco, Inc., 325 W. 25th Pl., Chicago 16, Ill., vary in size from 1¼ square feet per filter area to 100 square feet.

This type of Stellar filter furnished by Infilco to the Army is now available for civilian use

CASE HISTORY No. 7

Water Softening Plant, Fremont, Ohio

A SOFTENING PLANT

Wm. H. Schneider, Supt. & Chemist

Water Filtration Plant, Fremont, Ohio

"The City of Fremont, Ohio located on the Sandusky River in North Central Ohio, in the year of 1928 designed and built a water softening plant to handle 3,000,000 gallons of water per day. The plant was planned to soften and purify the very flashy Sandusky river water, with a turbidity reaching 3,000 p.p.m. and hardness up to 660 p.p.m.

"The plant was of a conventional design, employing Lime and Soda Ash for softening and Alum for coagulation. Trouble was encountered in forming a satisfactory floc in the colder months, especially with high turbidites. As the city grew and the demand increased, it was necessary to find a remedy for this condition, and after running laboratory tests indications were that an iron salt would give better results. An old feeder was converted so as to make it possible to run a plant scale test, using FERRI-FLOC.

"The conclusions reached from this plant test prompted our purchasing new feeding equipment suitable for feeding FERRI-FLOC. As a result of this change, we have secured a more satisfactory finished water throughout the entire year.

"Our thanks to the Technical Staff of the Tennessee Corporation for their assistance in solving our problem."

(signed) Wm. H. Schneider

TENNESSEE CORPORATION

Manufacturers of Ferri-Floc

Atlanta, Georgia **Lockland, Ohio**

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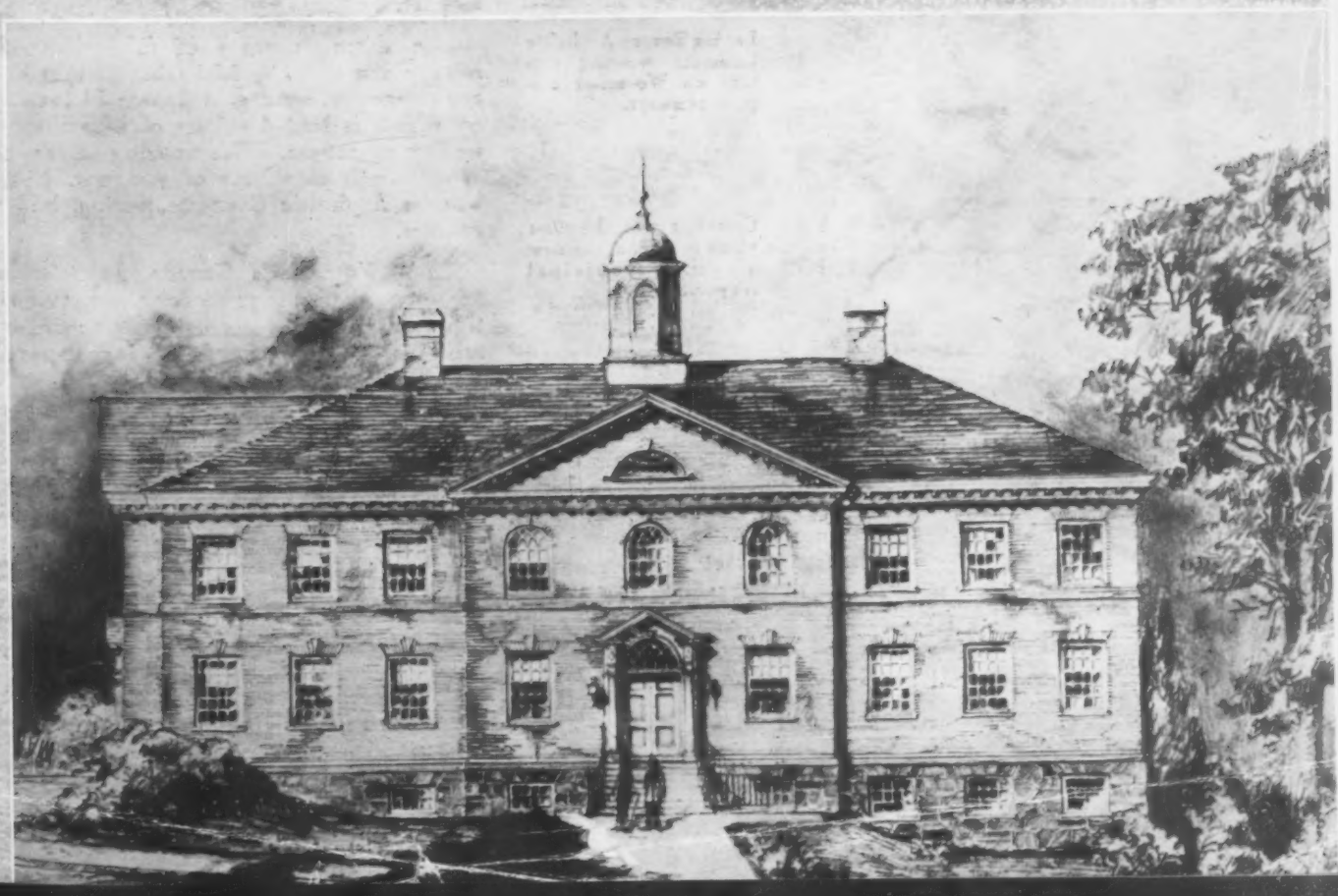
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